

UNITED STATES BANKRUPTCY COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION

CONFIDENTIAL PORTIONS INCLUDED

IN RE:)
)
GARLOCK SEALING TECHNOLOGIES)
LLC, et al,) No. 10-BK-31607
)
Debtors.) VOLUME XVI
) FULL DAY

TRANSCRIPT OF ESTIMATION TRIAL
BEFORE THE HONORABLE GEORGE R. HODGES
UNITED STATES BANKRUPTCY JUDGE
AUGUST 12, 2013

CONFIDENTIAL PORTIONS INCLUDED

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1 P R O C E E D I N G S

2 AUGUST 12, 2013, COURT CALLED TO ORDER 9:00 A.M.:

3 THE COURT: Have a seat and we'll get going.

4 Mr. Guy?

5 MR. GUY: Yes, good morning, Your Honor. We will be
6 submitting slightly revised exhibits for Dr. Rabinovitz.

7 THE COURT: Okay.

8 MR. GUY: Mr. Magee will be pleased to know it makes
9 the number a little bit smaller.

10 We also, on behalf of the FCR and myself, I would
11 like to thank the Court and everybody on the courtroom staff
12 for the last three weeks, that we appreciate all the
13 courtesies and patience.

14 THE COURT: Thank you all. We've appreciated the
15 entertainment and the stimulation.

16 Okay. So we'll go, I think, back with Dr.
17 Rabinovitz.

18 I did notice it was about time to quit, because I'm
19 almost out of candy.

20 FRANCINE F. RABINOVITZ,
21 Being previously sworn, was examined and testified as follows:

22 CROSS-EXAMINATION

23 BY MR. CASSADA:

24 Q. Good morning, Dr. Rabinovitz.

25 A. Good morning.

1 Q. Dr. Rabinovitz, you're not an economist, are you?

2 A. No, sir.

3 Q. Nor an econometrician?

4 A. No.

5 Q. Nor a statistician?

6 A. Nope.

7 Q. I believe you had testified your CV indicates that you've
8 got a Bachelor of Arts degree in government?

9 A. Correct.

10 Q. And a Ph.D. in political science?

11 A. Yes.

12 Q. But you regard the estimation work you do as science?

13 A. Yes, I do. The training that I received actually at
14 Cornell, but to a much, much greater extent at MIT, is
15 something called policy analysis now, and there are actual
16 programs, including the one I retired from at the University
17 of Southern California, which specializes in policy analysis,
18 which is the application of a variety of social science data
19 collection and analysis techniques like statistics, like
20 survey research, like finite mathematics and others to
21 important public problems. And therefore my training sends me
22 to major problems to try and deploy those techniques in order
23 to reach conclusions about policies that should be adopted
24 around them.

25 Q. You regard the predictive value of your work as an

1 important --

2 A. Yes, sir.

3 Q. -- test for its reliability?

4 A. Yes.

5 Q. And the core method you use is the same as the method
6 that Dr. Peterson uses, correct?

7 A. I think that's fair.

8 Q. Dr. Peterson testified he's applying the behavioral
9 science of law something like that, and you're describing your
10 science as policy analysis?

11 A. Yes.

12 Q. In the report that you rendered in this case, you've
13 added defense costs to your estimate of the liability.

14 A. Well, I included defense costs in the estimate, yes.

15 Q. To be clear, you included projected out-of-pocket
16 lawyer's fees and expert fees that Garlock might be expected
17 to incur in the court system?

18 A. We simply took Garlock's past expenditures for defense,
19 and projected them as a percentage, and took that forward.

20 Q. Okay.

21 A. That's material I believe Garlock provided.

22 Q. And you have even identified in your report, estimating
23 future defense costs as one of the steps of your methodology?

24 A. Yes.

25 Q. Now I've looked at the other reports that you've given in

1 previous bankruptcy cases, and I don't see that as a step in
2 any of your previous work, at least in estimating liability in
3 bankruptcy cases.

4 A. Well, two things: One, I believe that when you provided
5 me material for my ASARCO report, that it was actually
6 included there. But we have -- in cases where clearly there
7 is insolvency, not estimated the defense costs because it's
8 pointless. The indemnity costs are so overwhelming to the
9 financial situation of the company that there's no point in
10 it.

11 Moreover, here, Dr. Bates placed special emphasis on the
12 role of defense costs, and so that drew us -- given that his
13 explanation is -- involves their centrality to the resolution
14 of cases. So for all those reasons we did so here.

15 And as I think you're aware, we also do so in every SEC
16 filing that we prepare for solvent defendants.

17 Q. Well, I did not see that you had ever done that in a
18 bankruptcy case before. And I looked at the ASARCO
19 estimation, and I did see in the rebuttal report there was
20 some analysis of defense costs. But in the actual estimate of
21 the liability, you did not include defense costs.

22 A. That may be so.

23 Q. Okay. And as far as I can tell, you've never done that
24 in any bankruptcy case, correct?

25 A. Well as I said, one of the reasons was to explore further

1 what Dr. Bates had emphasized, i.e. that defense costs were an
2 important part of the decision making.

3 Q. And you were concerned that Garlock would not be
4 insolvent unless you included those costs?

5 A. Well, I don't think there's been any testimony on -- on
6 solvency. So I didn't know.

7 Q. Now, I did find buried in your report, that you couldn't
8 discern from your numbers the actual value that you attached
9 to the actual liability for claims. I've got Slide 2 up here.
10 And if we look back in the appendices to your report and the
11 cash flow numbers, we can deduct your projection of Garlock's
12 defense costs from your numbers and see that the liability for
13 the claims that you've estimated at the low \$893 million to a
14 high of \$949 million?

15 A. That's correct.

16 Q. So that's the number, if the court's interested in what
17 your estimate is for the liability for the actual claims,
18 those are the numbers, correct?

19 A. Yes. It is not hard to deduct the defense costs.

20 Q. Okay. You do understand that Garlock's lawyers and
21 experts, they don't have claims in this bankruptcy case for
22 amounts they would have earned if Garlock had not filed for
23 bankruptcy, correct?

24 A. Could you repeat that?

25 Q. You understand that Garlock's lawyers and experts, they

1 don't have claims in this bankruptcy case for fees they would
2 have earned had Garlock not filed, do they?

3 A. Yes, I understand that.

4 Q. And you understand that claimants aren't entitled to make
5 claims for those amounts either, correct?

6 A. Yes.

7 Q. Okay. I believe you had mentioned -- I did not hear you
8 mention it just now, but you mentioned that perhaps the
9 defense costs that Garlock incurred, would be a proxy for
10 administrative costs for the trust?

11 A. Yes.

12 Q. But you haven't estimated how much money a trust would
13 require for administrative costs to satisfy current and future
14 mesothelioma claims, correct?

15 A. Well, until we have a accepted trust distribution plan,
16 it is not possible to estimate the administrative and other
17 costs of implementing that plan.

18 By saying it's a proxy, what I mean is, I want to
19 emphasize that at the stage that that becomes possible for
20 whatever trust distribution process is adopted, it is
21 necessary to provide an estimate of those fees, particularly
22 as the expert for the future's representative, because we want
23 those set aside in a fund for administration, rather than
24 coming out of the overall corpus where it would disadvantage
25 the future claimants.

1 Q. But -- but you've not expressed any opinion in your
2 reports in this case about what administrative costs of a
3 Garlock trust would actually be, have you?

4 A. I have not. As I said, without an adopted trust
5 distribution process, it's not possible to make such an
6 estimate. Once there is one, I have participated in numerous
7 efforts, including the latest in the Quigley case which has
8 just gone to confirmation, to prepare such a budget and to ask
9 that those funds be set aside specifically for administration.

10 Q. But you acknowledge, don't you, that the administrative
11 costs of a trust are a small fraction of what the defense
12 costs were in the tort system, correct?

13 A. I hope so.

14 Q. Well, that's been your experience, hasn't it?

15 A. A small fraction may be too extreme, but yes, they're
16 less.

17 Q. Okay. And you have knowledge actually concerning the
18 administrative costs of trust because you've estimated those
19 amounts before and I believe you've testified that you're the
20 actual claims administrator for future reps in bankruptcy
21 cases?

22 A. Not claims administrator. I have been -- we have --

23 Q. Well, the claim's estimator, excuse me.

24 A. The claim's estimator?

25 Q. Yes.

1 A. Yes.

2 Q. But you do know those costs don't come anywhere near
3 approaching the amount of defense costs that defendants incur
4 in the tort system?

5 A. As I said, I sincerely hope so.

6 Q. Well, I'm not asking you what you hope. I'm asking your
7 experience, your knowledge about that. And you know for a
8 fact that those costs aren't anywhere near the amounts spent
9 in the tort system?

10 A. They are not, but it does depend somewhat on the trust
11 distribution process. For example, if one were adopting a
12 trust distribution process which emphasized the need or
13 required that every case go to verdict, you could find
14 yourself in a situation where the costs were very high. Under
15 the kind of mostly or almost entire settlement system in what
16 I suspected you would call the standard trust distribution
17 process being used today, that's not the case. That's my
18 hesitation. It does depend on what the provisions in the
19 trust distribution process actually are. And if they were to
20 emphasize litigation, those expenses could rise substantially.

21 We have, as an example, going all the way back to the
22 original Manville trust, which itself went under and then was
23 reorganized by Judge Weinstein in a class action, an early
24 experience with the cost of forcing cases on both sides into
25 the court rather than settling them and it was, I think, that

1 experience which caused the Manville trust after it was first
2 formed to go under again.

3 Q. But we're better off, aren't we, waiting to see what the
4 trust looks like in the trust distribution procedures before
5 we estimate trust administrative costs?

6 A. Yes, I think I've said that.

7 Q. Okay. Finally, you mentioned that you included an actual
8 out-of-pocket defense costs, because Dr. Bates had focused on
9 the role of avoidable defense costs played in determining the
10 level of Garlock's settlement payments?

11 A. Well, he -- he emphasizes the role of defense costs in
12 the thinking of the company, and therefore made me rethink how
13 I wanted to treat them, once again.

14 Q. So you do recognize, though, that the actual
15 out-of-pocket defense costs that you included in the defense
16 costs, are different from the avoidable defense costs that Dr.
17 Bates has emphasized?

18 A. Yes, as I understand what he is saying, that is his
19 definition.

20 Q. So are you saying that if the debtor hadn't made that
21 argument, then you wouldn't have included the defense costs in
22 your estimate?

23 A. No, I didn't say that. I said that there are several
24 reasons, one of which is the emphasis that he placed on the
25 role of defense costs.

1 Q. Okay. Let me ask you about your -- some more about your
2 methodology.

3 Now you've described your methodology really as being
4 quite simple, correct?

5 A. Well, you described it as being simple, it's actually
6 pretty complex. But I tried to reduce it to a series of
7 definable steps so that it is and was clear to the Court, to
8 other parties, and to anybody thinking about how to do this
9 analysis, or how this analysis was done.

10 Q. Well, we talked in Los Angeles a month ago about your
11 methodology. And I understand the only judgment call you
12 really make when you're applying your methodology to a
13 particular debtor, is the decision on what calibration period
14 to choose, right?

15 A. Well, I think what you asked me was -- let's see what did
16 you ask me.

17 Q. I'm sorry?

18 A. The screen just popped up in front of me. I was looking
19 at you and so I said, let's see what you did ask me.

20 Yes. This is -- you said to me, the choice of
21 calibration period hinges on your judgment about what period
22 of time in Garlock's history.

23 And then you say, so that's probably the biggest -- maybe
24 it's not the only judgment call or call that you're called
25 upon to make.

1 And I think I said it was, and this confirms it, that it
2 was the biggest, or you said it was the biggest.

3 Q. Right. But you agree with that, don't you?

4 A. That it is the biggest decision? Yes.

5 Q. Yes. In fact, I've looked at your report and I've
6 considered your testimony, and I can't really find another
7 judgment call in your methodology. It seems you've got your
8 calibration period, and then your claim rates, your claim --
9 your payment rates, and your settlement values all flow from
10 the data within your calibration period?

11 A. You're absolutely right. We are --

12 MR. GUY: Your Honor, Dr. Rabinovitz --

13 THE WITNESS: Sorry.

14 MR. GUY: I have to object because the following
15 sentence says, well let's talk about it. And then it says,
16 another important call, which we usually don't make in the
17 SEC-related world is the horizon projecting into the future.

18 Mr. Cassada, I'm sure inadvertently, is taking
19 snippets of the deposition transcript and not showing the --

20 THE COURT: All right.

21 MR. GUY: -- witness the full transcript --

22 MR. CASSADA: Well, Your Honor --

23 MR. GUY: -- which we have, Your Honor, and we're
24 happy to submit it.

25 MR. CASSADA: I think Mr. Guy knows that the horizon

1 is not a consideration in the bankruptcy case as Dr.

2 Rabinovitz --

3 THE COURT: Go ahead and ask the next question.

4 MR. CASSADA: Okay.

5 Q. So is there any other judgment call that you make in
6 estimating liability in a bankruptcy case?

7 A. I am happy to say that we are data driven.

8 Q. Okay.

9 A. We are not making large numbers of judgments outside what
10 the data tell us the actual situation is. So I think it's
11 helpful not to make a variety of judgment calls to the extent
12 that you can avoid it, and simply allow the data to dictate
13 what the conclusion should be.

14 Q. Okay. So the choice of the calibration period -- I've
15 been a little bit confused about the basis for that choice --
16 it's supposed to provide a snapshot of a period during which
17 Garlock's claims history or experience will look like -- what
18 you believe the future will look like?

19 A. Yes.

20 Q. So I thought I also heard you say you choose the
21 calibration period closest to bankruptcy period because judges
22 told you that's what you should choose.

23 A. Yes, but you can see that there is a little bit of
24 interpretation there when you look at the claim rates, next,
25 were we choosing a higher claim rate with less data we could

1 drive the claim rate up. So we're choosing not to take the
2 three year, or the four year, which would be higher in the
3 interests of maintaining more data in the five year.

4 But yes, we believe that in the Eagle-Picher case the
5 judge gave some helpful instructions about what he
6 anticipated -- anticipated estimators in his case, and future
7 estimators should be required to do. And he emphasized the
8 recency -- I'm not even going to try the propinquity -- I knew
9 I shouldn't -- the recency business as one of those criteria.

10 Q. So you follow the general rule that the most recent
11 history is the history you should use, and the judgment call
12 as to how far to go prior to the bankruptcy case to pick the
13 actual start date of your calibration period?

14 A. Yes.

15 Q. And you're aware that the amount Garlock has paid to
16 settle mesothelioma claims has varied over time, correct?

17 A. Yes.

18 Q. And this is a slide, Slide 4 that the Court and I believe
19 you probably have seen before too, which depicts the average
20 settlement value of a mesothelioma claim in the years
21 preceding the bankruptcy case.

22 A. Yes. This is without the zeros though. Remember that we
23 are more interested -- these are what we call positive pays,
24 that is, these are people who received compensation for their
25 claims.

1 A more interesting number has to do with the number of
2 positive pays combined with the number of zeros, because
3 there's a very large -- I believe the number is 46 percent --
4 who do not receive any compensation but have their claims
5 dismissed for zero. So these are the positive pays.

6 Q. Okay. Well we'll talk about the resolution amounts
7 including the zeros a little bit later. But as I understood
8 your testimony last Friday and when we talked in Los Angeles,
9 the only time period you considered was the time period 2002
10 to 2010, correct?

11 A. Well, we looked at the 1990s, but did not use them.

12 Q. Okay. But as I understand it, you looked at the 1990s
13 but you didn't undertake any analysis to determine why
14 Garlock's settlements increased from the 1990s to the 2000s,
15 correct?

16 A. Well, one of the things that was apparent in the data, is
17 that there are probably lots of group settlements in those
18 earlier periods. Because you get numbers which are pretty
19 even, suggesting that a total, maybe "X" the driver case, was
20 settled in group. And then either the plaintiffs' lawyers
21 were permitted to distribute those funds as they saw fit, or
22 at least there was little follow up as to what actually had
23 been paid to each individual after the group had been valued
24 as a whole.

25 So, we did discover that that style, I would call it, of

1 settling claims was less characteristic of the later period.
2 But we did not use the 1990s as a basis for calibrating the
3 future.

4 Q. Let me understand -- let me make sure I understand it.
5 Are you saying that you looked at the 1990s and determined
6 that you made some determination about why the settlement
7 values increased going into the 2000s?

8 A. No, I didn't say that. What I'm saying is, in the data
9 for the 1990s, it looks as if fairly even amounts were paid to
10 each individual. Why would that have happened? There are
11 really two ways to think about it.

12 One is, there's a driver case followed by a group
13 settlement and the plaintiff's lawyer is allowed to distribute
14 the funds for that group as he sees fit.

15 Or, once the group is settled, there isn't the kind of
16 detailed follow-up in recording the amounts that occurs later.

17 It's just a rather different period from the viewpoint
18 even of the company's handling of those claims. So we --
19 quite apart from the *Eagle-Picher* precedent, wanted to move
20 forward closer to what will be the future.

21 Q. Did you -- are you testifying that you have done this
22 analysis about group settlements as a way of understanding why
23 the settlements increased from the 1990s to the 2000s?

24 A. We simply -- I don't have a theory about why they
25 increased. They -- we simply looked at them and said, this is

1 what it looks like, let's go forward.

2 Q. Okay. So you didn't -- you didn't try to understand why
3 they increased. You just looked at the later period?

4 A. We looked at the data. We're data driven. We're not
5 introducing large theoretical concepts to the extent that we
6 can avoid them.

7 Plus, we have precedent we believe, or instruction from
8 the Eagle-Picher Corp. early on in this litigation that
9 suggests that recency is important.

10 Plus we know since we're doing work for all kinds of
11 clients, that there's been a lot of changes between the '90s
12 and indeed the 2000s to the 2005 period, which changed the
13 conditions for the future, compared to the far-away past.

14 Q. I guess that's what I'm trying to get at. That's whether
15 you analyzed those changes to determine what the forces were
16 that drove Garlock's settlement values. If I understand your
17 testimony, you have no understanding or opinion about what
18 actually caused that increase?

19 MR. GUY: Objection; asked and answered three times,
20 Your Honor.

21 THE COURT: Go ahead and do it one more time.

22 BY MR. CASSADA:

23 Q. Is that correct?

24 A. You seem to be implying that we didn't look. We did
25 look. Did we develop a full-blown theory about what happened

1 in the '90s, what happened in the 2000s before 2005, no, we
2 did not. But we could see in the data differences in the
3 company's behavior in the period. And we are told in
4 Eagle-Picher, recency is better. And we also believe that if
5 we're trying to predict the future, the likelihood that the
6 system will revert to the conditions in the 1990s may be
7 small.

8 Q. So in previous work though, you've recognized that the
9 big wave of bankruptcies that began in 2000 created enormous
10 pressure on companies that were not bankrupt "maintain the
11 cash flow of law firms to pay claimants"?

12 A. Can you do that again?

13 Q. Yeah. Slide 5 here shows your testimony in 2003 in the
14 Western Asbestos case. In there you talked about what caused
15 the increase in claims values for surviving defendants from
16 the 1990s to the 2000s and you recognized there, and I'm
17 quoting from your testimony, that it's been our view in recent
18 years that until the big wave of bankruptcies that's now
19 caught up in the courts all over the country -- bankruptcy
20 courts all over the country -- enter the system again, there
21 will be enormous pressure on companies which are not bankrupt
22 in some sense to "maintain the cash flow of law firms and pay
23 claimants".

24 Q. Do you recall that was your view before this bankruptcy
25 case, correct?

1 A. I'm reading. Give me just a second to read this.

2 Q. Okay.

3 A. And is there anything that follows it? Can we see the
4 next?

5 Q. I'm sure there is, if you're interested in it.

6 MR. GUY: Same objection, Your Honor.

7 THE WITNESS: Let's just make sure that I'm seeing
8 the whole thing. Because I've been -- I didn't ask that
9 before.

10 MR. GUY: Your Honor, this is a transcript from 10
11 years ago, which we haven't seen. Dr. Rabinovitz probably
12 hasn't seen in a long time. Again, snippets in isolation.

13 THE COURT: Okay. She can answer the questions if
14 she can.

15 BY MR. CASSADA:

16 Q. I'm happy to show it, but I guess --

17 A. Well, it's a 2003 -- it's 2003 testimony in Western Mac.
18 I just wanted to be sure I was looking at the whole thing.

19 Q. This doesn't refresh your recollection regarding --

20 A. Of what happened in Western Mac, no.

21 Q. Well, let me finish the question. This doesn't refresh
22 your recollection regarding what the view was at one time
23 about why settlement values for the surviving defendants
24 increased after the bankruptcy wave of 2000?

25 A. Yes. This is not probably as much about the 1990s as it

1 is about the 2000 to 2005 period. It's hard to know sitting
2 here today.

3 Q. So your testimony it appears right here -- it appears
4 right after that you said "so historically --

5 A. Where are you?

6 MR. GUY: May I have a copy of the transcript,
7 please?

8 MR. CASSADA: You can read it right here.

9 MR. GUY: May I have a copy of the whole transcript?

10 MR. CASSADA: "So historically we don't know how
11 long it will take --"

12 THE COURT: We'll let him ask about it. Go ahead.

13 BY MR. CASSADA:

14 Q. "We don't know how long it will take" -- this is you
15 testifying -- "to resolve the existing bankruptcies.
16 Historically it has taken an average of six years to resolve a
17 bankruptcy, in my view has been that because of the
18 consolidation --"

19 A. Can you give me the line? I can't read it off the
20 screen, so I'm going to read it here. If you could give me a
21 line, that would help me.

22 Q. Sure. (Handing paper writing to the witness.)

23 A. I'm still going to need the line. I can read it off this
24 screen if you give me the line.

25 Q. But it's --

1 A. What I meant was the big screen.

2 Q. Oh.

3 A. I can read it here if you give me the line.

4 Q. Understand. Okay.

5 A. Thank you, though.

6 Q. Sure. It's page 1292. The actual testimony we're
7 looking at begins on line 14.

8 A. Okay.

9 MR. GUY: Your Honor, we have no objection to this
10 being admitted into evidence if it will facilitate this.
11 2003 --

12 THE COURT: Go ahead and ask him --

13 THE WITNESS: I tried to move it, I didn't mean to
14 do that. I tried to move it to the next page.

15 MR. GUY: You wouldn't be the first one.

16 THE COURT: That's been getting everybody.

17 THE WITNESS: I was trying to see the continuation
18 of that sentence on what must be 1293. I was trying to move
19 it, but I made -- apparently made a red line -- "that the".
20 It's over there. That sentence is incomplete. I was just
21 going to read the next sentence.

22 BY MR. CASSADA:

23 Q. Which sentence were you going to read?

24 A. The sentence that says, "historically".

25 Q. Right. Okay. And it continues right below that.

1 A. Oh, it continues. No. Oh, okay. Continues -- that
2 1293's below it?

3 Q. That's correct?

4 A. Okay. This was talking about an increased model
5 trending -- claiming up. As you see at the end of the
6 paragraph, what I'm saying is that there's going to be a
7 period in which these asbestos bankruptcies are being
8 adjudicated in the courts and it might be six years, but
9 because the Delaware bankruptcy court has got all these cases
10 and is trying to be efficient about it, you might reduce it.
11 But during that period, whenever it turns out to be, we need
12 to expect that compensation will be pressed to the -- in this
13 period, called peripheral defendants, to increase for a period
14 of time and then flatten out into the future.

15 Q. So you were recognizing, weren't you, in the Western
16 case, that the settlement pressure on Western had increased
17 because these bankruptcies would flatten in the future when
18 those bankruptcies were resolved?

19 A. Well, that was -- that was the model we were using to
20 forecast Western MacArthur, yes.

21 Q. Okay. That -- okay. So that was your view then.

22 And that's what you didn't do in this case. You didn't
23 analyze whether those values had increased as a result of
24 those -- that wave of bankruptcies that you described?

25 A. Well we followed the data and we did not use an increase

1 model in estimating Garlock liabilities. Because we've moved
2 forward and -- in the period from about 2000 to generally
3 2005, those bankruptcies have begun to pay claims so we did
4 not use an increase model here.

5 You talked at length with Dr. Peterson about an increased
6 model in his analysis. We did not use an increased model
7 here. Because now these big trusts are -- not all of them,
8 some of them are still coming online, Quigley, for example,
9 but now many of the trusts are functioning and paying
10 claimants.

11 Q. That's what I want to ask you about, because you did
12 recognize in previous work that the availability of the
13 \$30 billion in trust, and the money that would be flowing -- I
14 think you said that it would place "considerable downward
15 pressure on the defendant's indemnity values in the future",
16 correct?

17 A. Well, I don't know whether that's exactly what I said.
18 But you are correct that in this period looking at Western
19 MacArthur, I said there's going to be in the 2000 -- what
20 turned out to be the 2000 to 2005 period, there's going to be
21 an increase because of the complete absence of a lot of large
22 companies from the payment stream and in bankruptcy. And then
23 I did expect that when they began to operate these trusts, the
24 pressure would decrease.

25 Now, that is not what has happened. If you look at

1 solvent defendants -- the solvent defendants I look at every
2 quarter and every year, it is not decreasing.

3 So that was an incorrect expectation, at least with
4 regard to the time period from 2005 to today. And I think we
5 talked about the fact that the casualty actuaries followed
6 this very closely. They have not seen a decrease in pressure.
7 And the big property casualty insurers are indeed increasing
8 their reserves. Although as I said, they may have
9 under-reserved in past years, so there's kind of a mixed
10 motivation there. It just didn't happen.

11 Q. Okay. We'll get to that. In fact, I'm going to show you
12 the Tillinghast half-slide presentation that you reviewed in
13 that regard. They didn't connect the increased reserves to
14 the situation with the trust, did they? At least you
15 testified last Friday that you couldn't really make that
16 connection.

17 A. Well, they are -- their -- their data is drawn largely
18 from the property casualty insurers.

19 Q. And you did --

20 A. So they -- they are simply looking at what appears to be
21 happening and not why. They're simply reporting on how the
22 property casualty industry is behaving.

23 Q. They did look at the why, because they talked during that
24 presentation about the national issue of importance that the
25 trusts weren't transparent, and that the defendants in the

1 tort system were fighting to gain trust transparency. You do
2 remember that, don't you?

3 A. I do remember it. You are making that a more value-laden
4 discussion. You'll have to show me the exact document, but I
5 think it's more neutral than that.

6 Q. You do recall that they connected the two?

7 A. Well, they talked about the fact that many companies were
8 pushing for what is here called -- has come to be called
9 transparency.

10 I think as somebody who has tried to obtain data on both
11 sides of the fence, that is from companies in the FAIR Act
12 effort, nobody is transparent. No one wants to give up their
13 individual data and documents.

14 But I do know that they talked about what was happening,
15 but in a less value-laden way than I think you are expressing
16 it.

17 Q. Let's just be clear. In 2009 -- well, in 2009 you
18 submitted a proffer or a declaration attaching estimation
19 reports in the ASARCO case that you had submitted in previous
20 years I believe in 2007?

21 A. Say that again?

22 Q. Let me back up from there.

23 A. Okay.

24 Q. You were -- and I think we saw this on your CV, you were
25 a claims estimator in the ASARCO case?

1 A. I was, for ASARCO.

2 Q. Okay, for ASARCO. So in that case unlike this case, you
3 were the claim's estimator for the debtor?

4 A. Correct.

5 Q. Okay. And in that case when you were rebutting
6 Dr. Peterson's report, and Dr. Peterson had projected that
7 ASARCO's values would go up because of the bankruptcy wave and
8 you disagreed with that, but then you stated in the report
9 that "even assuming that the LAS argument that plaintiffs'
10 firms had to make up their losses from the loss of eight major
11 defendants, and CCR payments is true, the recent availability
12 of \$30 billion in new asbestos trust assets would place
13 considerable downward pressure on indemnity values". Do you
14 recall that?

15 A. I do.

16 Q. Okay. And you went on to say, "setoff or settlement
17 credits were required by law in three of the states where the
18 entities were sued in the largest numbers, Texas, Ohio and
19 Pennsylvania, and may also be available in a fourth,
20 Mississippi." Do you recall that?

21 A. I do.

22 Q. In fact in that case, you asked, didn't you, the debtor's
23 law firm Baker Botts to prepare a legal memorandum for you,
24 explaining what the rules were for setoff and allocation in
25 key states, correct?

1 A. Yes, sir.

2 Q. And you relied on that memo in rendering your opinion?

3 A. I did.

4 Q. So you were taking a merits-based approach. You were
5 saying that since the law would require this, then you would
6 expect considerable downward pressure on indemnity values,
7 right?

8 A. Yes. And I said to you in deposition on this issue, I
9 was wrong, and I'm the person who's been wrong about the
10 aggregate situation a couple of times before.

11 Remember that I was the estimator for the FAIR Act, which
12 I sincerely believed would pass, and would be a good thing for
13 everybody. And it is our firm that produced the theory and
14 the initial bone structure of the asbestos claim facility
15 before that was adopted in 1982, closed down in 1985.

16 So I did think that when these trusts opened, there would
17 be downward pressure on indemnity values for the remaining
18 solvent defendants. But as the Tillinghast and others -- or
19 Towers Watson and other information suggests, it isn't
20 happening. I've been wrong before.

21 Q. Yes. But going back to your support of the FAIR Act.
22 You said you testified in support of that?

23 A. I did.

24 Q. And you thought it would be a good thing?

25 A. I did.

1 Q. You recall that under the FAIR Act there's going to be a
2 trust set up and all of the defendants were going to
3 contribute to the trust?

4 A. The defendants and the insurers.

5 Q. So the people who had mesothelioma claims would assert
6 their claims against the trust and not against defendants?

7 A. All the defendants and all the insurance would have been
8 drawn together. First the insurance, and then in a formulaic
9 way, actually not unrelated to what was tried in the asbestos
10 claim facility, companies would continue to contribute. It's
11 not that the burden on companies would go away. Insurers were
12 being asked and it wasn't a popular request, to put all of
13 their reserves into the first couple of years of the operation
14 of the FAIR Act Trust. And then after that, the companies
15 were going to contribute on a formulaic basis.

16 And indeed the issue which caused the defeat was some of
17 the Senators were dubious that you could go and continue that
18 pattern. They were afraid that eventually there would be
19 resources required from the federal government and they sure
20 didn't want that to happen.

21 Q. You recall that under the FAIR Act, mesothelioma
22 claimants would be paid by the trust in lieu of payments from
23 the defendants and their insurers?

24 A. Yes. There would no longer be payments from the
25 defendants and the insurers. That was the premise.

1 But the insurers were being asked to put all their
2 reserves in up front. The companies, on a formulaic basis,
3 were going to contribute into the future as long as necessary.

4 And what Senator Nichol, I think, was particularly
5 concerned about was, that if you wanted to increase that
6 amount -- if what the companies by formula were contributing
7 wasn't enough, there would be recourse to the budget of the
8 federal government which was very unpopular.

9 Q. Right. Do you recall that the mesothelioma claimants
10 under the FAIR Act would receive approximately \$1.1 million
11 for their mesothelioma claims?

12 A. I do not.

13 Q. Okay. But you in any event at the time you were
14 knowledgeable and you thought the FAIR Act was fair?

15 A. Yes. I have advocated for, as in the asbestos claims
16 facility and the FAIR Act, what I might call comprehensive
17 solutions where all the claimants were treated together. And
18 it has never happened.

19 Q. But in any event, back in 2009 when you were representing
20 or serving as the claim's estimator for ASARCO, it was your
21 belief that ASARCO's settlement values would be subject to
22 considerable downward pressure because of the emerging
23 bankruptcy trust, correct?

24 MR. GUY: Objection; asked and answered, Your Honor.

25 THE COURT: Sustained.

1 BY MR. CASSADA:

2 Q. And this graph here showing actual aggregate bankruptcy
3 trust payments by year, this is why you believed that, right?
4 Because beginning in 2007, this amount of money from trust
5 increased greatly.

6 A. Yes. And this is one of the things which makes the
7 current -- you can see, this is one of the things which
8 suggests the sensible nature of the later calibration period,
9 the post-2005 calibration period.

10 Q. I'm going to ask you about that. But we see the spike in
11 trust payments in 2008, 2009, 2010. That's in part to address
12 the -- an issue I believe you testified about on Friday, and
13 that's that the trusts are paying a backlog of claims that
14 built up over the 2000s?

15 A. Say again? The trusts are paying --

16 Q. A backlog of claims that built up against the underlying
17 debtors during the decade, correct?

18 A. Yes, and two things are going on. What happens at the
19 front end of these trusts is in some ways distinguishable from
20 the future. In addition to the backlog of claims I was trying
21 to say on Direct, there are also prepetition settlements by
22 parent corporations. Now in the Halliburton situation for
23 Dresser, those were paid outside the trust. But currently the
24 trend seems to be that the prepetition settlements, a lot of
25 which are made by the parent company, are paid at the front

1 end of the opening of the bankruptcy as well. So not only is
2 there the backlog of claimants who've been waiting -- you
3 know, sometimes a very long period of time as in Quigley -- to
4 file their claims, but in addition prepetition settlements
5 which were made by the debtor are waiting, because those are
6 now paid at the time the trust opens, rather than as was the
7 case in, I think -- at least an early example of that,
8 Halliburton's prepetition settlements on behalf of DII
9 Dresser.

10 Q. Okay. So in any event, the huge spike in payments early
11 on is in large part, these are payments of claims in the past,
12 claims that defendants in the tort system would have already
13 paid, correct?

14 A. Well, I don't know if they would have paid them or they
15 were still not settling them. I can't tell you whether they
16 would have paid them or not.

17 Q. Well, you've done no analysis to determine one way or the
18 other?

19 A. Well, I don't know for all defendants whether the claims
20 that are paid by the trust, are waiting in the queue not -- I
21 mean, the timing is really unknown for the whole system --

22 Q. But the time --

23 A. -- in my view.

24 Q. But the timing is important, you would agree, in order to
25 determine whether payments from the trust would result in the

1 huge downward pressure that you said you believed would take
2 place?

3 A. Well, again, but it is unknown. That is, I don't know --
4 in a general way it's clear that many claimants are forced to
5 wait during the pendency of the bankruptcies, and not only are
6 they people who will be settling with the trust, but they are
7 people who have already settled, and are waiting for their
8 prepetition settlements to actually be paid. How that does
9 get paid with regard to any individual and any other
10 defendant, is not something I know.

11 Q. It's not something you know, but my question was a little
12 bit different. That is, it would be information that would be
13 important for you to have, if you were going to analyze
14 whether these trust payments would provide the type of
15 downward pressure that you testified you expected in 2009?

16 A. There's no way --

17 MR. GUY: Objection, Your Honor. The ASARCO report
18 is 2007. Mr. Cassada I think keeps on referring to it as
19 2009. We can put it on the screen if you'd like.

20 MR. CASSADA: It is 2007, but she testified in her
21 deposition this was her belief when she submitted her reports
22 in 2009, Mr. Guy. And she's testified --

23 THE COURT: All right. Let's go ahead and answer
24 the question.

25 THE WITNESS: I don't think what you're asking is

1 knowable.

2 BY MR. CASSADA:

3 Q. Yeah, I understand you don't think it's knowable, but it
4 would be very useful to have that information if you were to
5 determine whether the type of downward pressure you expected
6 would actually occur. My question is not whether it's
7 knowable, but just whether --

8 A. If it's not knowable, I don't know whether it would be
9 useful or not. I mean, as I said, I'm data driven. You're
10 saying that makes for simple modeling. It doesn't make for a
11 lot of speculation.

12 Q. Okay. But let me -- so you have no opinion regarding
13 whether that would be useful information in order to determine
14 whether the downward pressure would actually take place?

15 MR. GUY: Objection; asked and answered, Your Honor.

16 THE COURT: Sustained. Let's go on.

17 BY MR. CASSADA:

18 Q. Now you say it's not knowable, we talked about this a
19 little bit in the deposition. But you understand, don't you,
20 that Garlock asked for that information in this bankruptcy
21 case? And actually received some data from the DCPF trust?

22 A. I do know that Garlock received and we received data from
23 the Delaware Claims Processing Facility.

24 Q. Was that data not useful to you in answering this very
25 question in matching the timing of the payments?

1 A. Well, Dr. Bates reached some conclusions from it, and
2 they were very important to him. But he only had about half
3 the claimants represented. So we withheld and withhold
4 judgment on that.

5 Q. So he only had half of the claimants represented because
6 Garlock was unable to get the information on the other
7 claimants?

8 A. Again, I'm not speculating on why.

9 Q. Well, yeah, that's what you acknowledged in your --

10 A. I said, it's certainly a possibility.

11 Q. Okay. But you didn't analyze the data from the half of
12 the claimants to see if they provided any information on the
13 timing of the payments?

14 A. Well, we wanted to know what had happened to the other
15 half and didn't know. So it was not -- we looked at it, but
16 it was not a major factor for us.

17 Q. You looked at it, but you didn't reach any -- undertake
18 any analysis on the timing question?

19 A. Tell me again what -- repeat to me where you are and what
20 the timing question is now. We're a long way downward on --

21 Q. We're in our bankruptcy case now, and you've got the data
22 on the DCPF Trust, which you say is only half --

23 A. Getting -- it's not a trust. DCPF is the Delaware
24 Claims Processing Facility. It itself, I believe it has 10 --

25 Q. It has 10 --

1 A. -- trusts for whom it processes claims.

2 MR. GUY: Your Honor, may the witness finish her
3 answer?

4 THE COURT: Yeah --

5 MR. CASSADA: I believe she was finished, Your
6 Honor.

7 Q. When I refer to the DCPF Trust, I'm talking about the 10
8 trusts that the DCPF serves as claims processor for.

9 A. Okay.

10 Q. And those are many of those major eight defendants that
11 you talked about in your ASARCO report, right?

12 A. Well, it has a set of major defendants, and now Verus has
13 another very large set. And Manville Claim Processing
14 Facility, CRMC, the Claims Resolution Management Corporation
15 has and will have another group. And there are some of these
16 trusts which manage with an internal staff. And then there
17 are the four trusts, I believe, two Thorpes, Western and
18 Plant, which are in the sort of -- we call them briefly the
19 Western Trusts, which have a separate claims processing
20 facility. So there are a lot of other operations out there.

21 Q. Yeah. But back to my question. And I don't believe I've
22 gotten an answer to it, that is, you didn't analyze the data
23 that Garlock was successful in receiving from the DCPF-related
24 trusts in order to consider this timing issue?

25 A. Well, as I said, we discovered that it was not

1 comprehensive. Maybe through no fault of Garlock's, and
2 therefore noted that Dr. Bates had reached a conclusion about
3 it, but did not go further than that.

4 Q. So you analyzed it to conclude that it wasn't sufficient
5 to provide --

6 MR. GUY: Objection; asked and answered, Your Honor.
7 BY MR. CASSADA:

8 Q. -- information about the question?

9 THE COURT: Sustained.

10 BY MR. CASSADA:

11 Q. Now before you chose your calibration period in this
12 case, you did not consider whether Garlock would receive a
13 considerable downward pressure that you -- on the settlement
14 values that you had predicted for ASARCO, correct?

15 A. I think I've already said that I did expect it, but our
16 experience since then, along with the things Towers Watson had
17 been saying, does not support the notion that it is occurring.

18 Q. Okay. So the timing of when your views on this subject
19 changed is what I'm getting at.

20 When Garlock filed this case and you were appointed as
21 claim's estimator, you were of the view then that defendants
22 like Garlock would receive future downward pressure on their
23 settlement values, correct?

24 A. Well, I don't think I had any views at that point with
25 respect to Garlock, no views at all. And what I'm saying is,

1 as I sit here today, and as we started to do analysis, one of
2 the things I knew about, was the record of the solvent
3 companies for whom we do every quarter and every year, over,
4 and over, and over again, forecasts for SEC purposes.

5 And as you know, I don't distinguish between the
6 applicability of the SEC forecasts and other pieces of
7 analysis, and there we are not seeing it.

8 I think I told you also in deposition that I went back
9 into the Towers Watson actuarial conferences and they confirm
10 that view.

11 Q. So when you -- when the case was filed and you're
12 appointed as estimator, you had an open mind on the issue?

13 A. Yes.

14 Q. Okay. And you knew that it was an issue, right, because
15 you had brought it up in ASARCO, and you I take it read
16 Garlock's information brief which talked about the importance
17 of that issue to Garlock?

18 A. Yes.

19 Q. Okay. In fact, you did not consider the potential trust
20 impact on Garlock until long after Dr. Bates and you rendered
21 your initial reports?

22 A. I can't tell you when I thought about it, but I've been
23 thinking about this situation of the solvent defendants over
24 and over, and you can see the list of how many there are in
25 the qualifications that Mr. Guy put forward. So I think about

1 them all the time.

2 In addition, the rules for -- most companies have
3 consulted actuarial and legal consultants in determining what
4 steps they have to go through in order to file a qualified
5 contingent claim forecast for asbestos. And one of the things
6 that most of those consultants and actuarials tell them is,
7 every year they have to review the overall situation in the
8 asbestos litigation in general.

9 So every year, several times a year, a little bell goes
10 off and I see an agenda for the next company analysis and its
11 discussion by -- usually a combined group of the finance and
12 legal folks from the particular company, and we reconsider
13 what is happening. Also I'm looking at their data and I can
14 see that the pressure on them is not decreasing.

15 Q. Okay. Yeah. But, in connection with this case --

16 A. Um-hmm.

17 Q. -- this was an issue in this case, and I mean, to be
18 precise, you didn't consider this issue until long after all
19 the reports were in and you were preparing for your
20 deposition, correct?

21 MR. GUY: Objection; asked and answered, Your Honor.

22 THE COURT: Sustained.

23 MR. CASSADA: I have not asked that question.

24 THE COURT: She's answered.

25 MR. CASSADA: I'm sorry?

1 THE COURT: I think she's provided that information.

2 MR. CASSADA: Let me -- well --

3 Q. Just to provide what she said during her deposition about
4 this very issue and the timing and how it differs from her
5 answer today, I'd like to actually play a portion of her --

6 MR. GUY: Your Honor, they're welcome to submit the
7 transcript, but we're going over plowed grounds.

8 THE COURT: Well, we'll let him play this.

9 (Video deposition plays.)

10 (Video deposition stopped.)

11 BY MR. CASSADA:

12 Q. Okay. So you considered the issue for the first time
13 just two weeks before your deposition?

14 MR. GUY: Objection; asked and answered, Your Honor.

15 THE COURT: Go ahead.

16 THE WITNESS: I was -- you were asking me about the
17 specific Towers Watson contribution. I'm sitting there every
18 year looking at the results for SEC examination -- SEC
19 filings -- sorry, on contingent liability. So how those
20 decisions come together is in some general way.

21 What we were talking about was when did I look for
22 the Towers Watson material as confirmation of what I was
23 seeing from the solvent defendants I deal with every quarter.

24 BY MR. CASSADA:

25 Q. You recognize, don't you, and I believe you testified to

1 this effect in your deposition, that lack of trust
2 transparency could be the reason why defendants have not
3 received relief from the trust, correct?

4 A. I don't think that -- first, I think the trans-- as I've
5 already said, I think the transparency business has become a
6 buzz word, and should be used more generally.

7 As I've said earlier this morning, I am someone who went
8 looking for data on experience in the early days of the
9 asbestos claims facility, because they wanted to have a
10 formulaic approach to assigning responsibility for shares.
11 And nobody wanted to give us anything. They eventually did.

12 Then I went looking again, the asbestos claims facility
13 had long gone. I went looking again when the FAIR Act was
14 being considered, and it was my responsibility to forecast and
15 assist the CBO to understand what kinds of funds would be
16 necessary in the future for the whole array of solvent
17 defendants who would join such a trust.

18 And again, the companies didn't want to provide me that
19 data. Now some of them, not all of them, but some of them
20 eventually did, with pressure from the law firms which were
21 supporting the work on the legislation, because they needed
22 numbers. They needed to be able to say to the Congress, we're
23 contributing "X" from the companies to top and provide later
24 funding for what the insurers will be asked to provide. I
25 mean, what the insurance reserves were, was easily calculable.

1 Q. I don't believe you're answering my question.

2 A. Reask it.

3 Q. I asked you that you recognize that the lack of trust
4 transparency could be a reason why defendants had not received
5 the relief and formed the downward pressure on settlement
6 values from the trust. That's a question I asked you during
7 your deposition.

8 A. Right.

9 Q. And you acknowledge that could be a reason.

10 A. Could be. But all I'm saying to you is --

11 Q. That's all I'm asking.

12 A. -- this has taken on a life of its own. Nobody is
13 transparent or wants to be transparent on either the defendant
14 or the plaintiff side. People don't like to give up their
15 data.

16 Q. You recognize that -- and I believe you stated, the trust
17 transparency is a very important national issue, and that was
18 brought out in the Tillinghast papers that you said you had
19 reviewed?

20 A. Well, yes. There was a piece of legislation, in fact I'm
21 well aware of that.

22 Q. I think you understood that Mr. Guy's partner, James
23 Stengel, is a major proponent of trust transparency and
24 testified in front of Congress on that?

25 A. I do, and he was my client in the FAIR Act -- or one of

1 my clients in the FAIR Act, but probably one of the leading
2 clients, so, yes.

3 Q. But you've not analyzed, and you don't know whether
4 Garlock failed to receive relief in the past which you say --
5 which you apparently concluded, because of lack of
6 transparency?

7 A. I do not.

8 Q. Okay. During your deposition you testified that you
9 looked at Garlock's most recent five-year period to consider
10 whether there was empirical evidence that it received relief
11 from the trust, and you stated that its indemnity values
12 showed no such evidence because they were increasing. Do you
13 recall that?

14 A. Say again, because I'm looking at this chart.

15 Q. Well, one of the things --

16 A. What -- go ahead.

17 Q. One of the things we've explored in your deposition is
18 whether you had any empirical evidence that Garlock had not
19 received relief from the trust prior to its bankruptcy and you
20 said that there was no evidence. And you pointed to its --
21 the history in the five years preceding the case, and I
22 believe what you said the increasing settlement amount.

23 A. Well, the positive pay -- don't forget for me I tried to
24 make an actual five-year period, and 2005 therefore is in
25 there for only half the year, and 2010 is in there for the

1 remaining half of the year, basically before and after, so we
2 have a complete five-year period.

3 So the -- I'm talking with my hands and that's silly in
4 this situation. So the 2010 and 2005 results are -- let's
5 call it unusual. The settled indemnity payments are pretty
6 flat, not looking at 2005 and 2010, call them about \$70,000 of
7 positive pay case. And the closed indemnity -- that is with
8 the zeros in -- results are pretty flat. Call it -- there's a
9 little more variation there because of the way the zeros
10 usually operate. But call it, you know, 35 to 45 or something
11 like that on average.

12 So if we were expecting that starting in -- sometime in
13 or after 2005 the trusts were going to come in, pay huge
14 amounts of money which they are doing, and cause those settled
15 indemnity values in particular to go down, it doesn't seem to
16 have happened. They're pretty flat taking into account the
17 special nature of our use of 2005 and 2010.

18 Q. But you considered the first half of 2010 and you -- we
19 see this spike in your interpretation of the data, settlement
20 values 92,000 --

21 A. Yeah. We don't -- I can see the 92,000 it's right up
22 there. But in our regular work, there's periodicity in these
23 settlements, and a half a year -- I want to look at the whole
24 year at a minimum.

25 Q. Okay.

1 A. Because during the year, you can see that many different
2 things happen.

3 Do these results also reflect knowledge in the company
4 that the bankruptcy is about to happen and a strategy for the
5 cases it wishes to settle before the declaration and after? I
6 don't know. I have no way of knowing that.

7 But using a half a year is not a very good idea usually,
8 until the year ends. Companies are working on these --

9 Q. Okay.

10 A. -- year long and so --

11 Q. When I --

12 A. Half a year is likely to be a sport.

13 Q. It wasn't a good idea but you used it. And you testified
14 before, I think you acknowledged last Friday, that you
15 included in the payment in this here pretty large judgment,
16 that Garlock had actually suffered before your calibration
17 period --

18 A. No --

19 Q. -- but paid -- but paid in prior years during your
20 calibration period, but in any event, several years before
21 2010.

22 So you included three judgments -- Puller, Snyder and
23 Wilson -- that had been paid in previous years. You included
24 that in 2010, and it indicated a spike in the average
25 settlement amount, right?

1 A. I didn't say that there was a spike. What I said was --
2 and these three have been discussed endlessly, but let's do it
3 again.

4 Q. Well, I just want to know whether that's what you did --

5 MR. GUY: Your Honor, may the witness --

6 MR. CASSADA: -- understand why you did it --

7 MR. GUY: -- finish her answer?

8 THE COURT: Let her answer the question.

9 MR. CASSADA: Okay.

10 THE WITNESS: These three claims shown in the
11 database, with the last payment date of 2010. When Dr. Garcia
12 or Dr. Bates -- or and Dr. Bates suggested that they were
13 misplaced we looked further. We discovered that the 2010
14 payment was a payment to Garlock for contribution from trusts.
15 And that these claimants had received their payments in 2006
16 and 2007, which was in our calibration period. So for our
17 analytic purposes, it didn't make any difference.

18 Second, we've already said we do not believe that
19 verdict date is the correct date to use. Because as others
20 have testified, after a verdict, stuff happens. There's an
21 appeal by one side or the other, one side or the other may
22 decide to settle. And in addition here, there's the step of
23 obtaining contribution from the trusts.

24 So those three cases which we originally had in 2010
25 were recalculated as if they were in 2006 and 2007 and doesn't

1 make any difference because they're still in the calibration
2 period.

3 Now I recognize that you're saying that the \$92,000
4 there may be affected by those three cases, which would make
5 it more in line probably, I mean, I don't know what the result
6 is -- but it would make it more in line with the about 70 to
7 \$75,000 that was typical of the settled indemnity in the
8 earlier period.

9 I just don't see that these years are very different
10 from each other. And I continue to believe that the half
11 years are reasonably unreliable, given our experience with
12 solvent defendants.

13 BY MR. CASSADA:

14 Q. Well, you included the half year and actually if we take
15 the judgments that were paid you testified in 2006 and 2007
16 and you move them there, it has a dramatic affect on the trend
17 in average settlement amount. As you see here the \$92,000
18 figure you have would decrease to \$59,836.

19 MR. GUY: Your Honor, this is Dr. Garcia's report.
20 He's welcome to ask Dr. Garcia about it.

21 THE COURT: Well, he can ask her if she agrees with
22 it.

23 BY MR. CASSADA:

24 Q. Did you undertake to see what the result would have been
25 in your analysis about average settlement payments, if you had

1 put the judgment payments in their proper year?

2 A. First, I'm not agreeing to a proper year after all of
3 this, but I won't go through it again.

4 Second, we had chosen a calibration period. So our focus
5 was not on the year-to-year variations, but on the aggregate.
6 And it didn't affect the aggregate for the reasons that I've
7 already stated.

8 Q. But it did affect the trend, and the trend --

9 A. We did not -- you know, Mr. Cassada, that we did not make
10 a trend analysis here. Dr. Peterson did. We did not. When
11 we see a trend rather than seeing relative stability -- it's
12 never absolute -- we do not do the trend analysis and we
13 didn't do it here. We simply said what's the result of
14 looking at the five-year calibration period. And we did not
15 calculate a trend forward because we thought it wasn't there.

16 Q. Well the trend analysis would have been important and I
17 think you've testified about this earlier, in determining
18 whether Garlock was or had already received relief from trust
19 payments. And if we take the --

20 A. I was not as wholly focused on the trusts as you are. So
21 we were trying to look at Garlock's experience, and therefore
22 here did not do an increase analysis. We said this looks
23 flat, period.

24 Q. Well when you take the payments and put them in the
25 proper years -- and I understand that you think that even

1 though the judgments were paid many years before 2010, Garlock
2 received contribution payments in 2010, and therefore you have
3 moved the payments to that year.

4 But if you move the payments to the year they were
5 actually made, then you see a trend here in the overall
6 resolution amount, a remarkably downward trend.

7 If you had done that, would this have piqued your
8 interest? Would you have been interested in determining what
9 it was that was driving Garlock's resolution amounts down?

10 A. I do not know.

11 Q. Okay. You also had testified the reason you chose 2005
12 as the beginning of your calibration period, there was some
13 unidentified strategic change that occurred in that year. You
14 said something happened and it would be speculation for you to
15 understand what happened or to say what happened. Do you
16 recall that?

17 A. I do.

18 Q. Okay. And you picked this date and determined this only
19 by trying to find a period where the numbers look similar to
20 the very recent past; is that correct? Do I understand that
21 correctly?

22 A. I just looked at those numbers and you can see there that
23 earlier Garlock was in a mode -- I'm -- perfectly reasonable
24 mode which was basically to settle everything, and that 2005
25 it didn't look like that was what was happening. Surely there

1 was a change, and moving forward we were in a different
2 behavior mode.

3 Q. There was a change, but you don't ever investigate the
4 reason why settlements change over time, correct, because you
5 think those are secondarily important to your work?

6 A. I said I think here that I don't speculate. I could
7 speculate on the reason, but I don't want to do that.

8 Q. Right. But you have to speculate because you didn't
9 investigate?

10 A. What I would have had to investigate would have remained
11 speculative. It would have been the role of insurance
12 recoveries in those early years.

13 My experience of the property casualty industry is that
14 the asbestos insurers want to run those policies out. And
15 they have a role in all of the decision-making of the
16 companies too, and it would not surprise me at all if what was
17 going on was that the insurers were offering financial
18 incentives to cause the company to settle as much as possible
19 and not to litigate anything. Do I know that was happening?
20 I do not. Was I prepared to undertake an elaborate
21 archeological expedition into the role of insurance? I was
22 not.

23 Q. Okay. But you didn't -- I take it, then, you didn't
24 understand that the evidence in this case was that Garlock had
25 resolved its insurance long before -- most of its insurance

1 long before the 2000s and had control over the defense of
2 asbestos claims, and therefore insured decisions weren't
3 impacting Garlock's settlement decision?

4 A. Well as I said, I didn't proceed to investigate the
5 reasons, because I know what a nightmare it is to try and
6 untangle some of that.

7 Q. Okay. But you --

8 A. Probably there are agreements -- probably those
9 agreements spell out not an immediate cash payment, but some
10 of them are year to year from the insurers, and one would have
11 had to figure out what those agreements looked like. We
12 didn't do it. And I have said to you we didn't do it. But
13 that means we couldn't have figured out what was responsible
14 for the change in strategy.

15 Q. So you didn't do it in part because it's not important to
16 your work and methodology?

17 MR. GUY: Objection; asked and answered three times,
18 Your Honor.

19 THE COURT: Sustained.

20 BY MR. CASSADA:

21 Q. In your past estimation work, the future often has proven
22 not to resemble the recent past, correct?

23 A. If that's a way of saying we've been low, and trusts have
24 reduced their payment percentages; that is true.

25 Q. Okay. But sometimes you've been high. I mean, not only

1 high, but gargantuanly high. I mean, in your work in the
2 Fibreboard case and the Owens Corning case -- and by the way,
3 that's the one where you held out as the one where the judge
4 accepted your opinion, correct?

5 A. Yes, sir.

6 Q. And in that case --

7 A. He did.

8 Q. -- you estimated under three different scenarios using
9 three different calibration periods, hundreds and hundreds of
10 thousands of nonmalignant claims, which you projected would
11 cost billions and billions of dollars, correct?

12 A. I do not remember the exact numbers, but --

13 Q. But you --

14 A. -- at the time that we were doing this estimation, there
15 were huge numbers of nonmalignant claims. Then as many people
16 have said here, Judge Jack made an important and remarkable
17 decision in the context of the Corpus Christi case, and that
18 changed what was occurring with respect to nonmalignant
19 claims. And it also changed what was going to occur with
20 regard to the mesothelioma claims.

21 We are data driven. We didn't anticipate her decision.
22 I don't see how we could have anticipated her decision. It
23 was a remarkable decision, and things change.

24 That is, the nonmalignant claims virtually dried up and
25 we've been waiting to see what would happen next. One thing

1 which may happen next in connection with litigation over the
2 lung cancer cases, is that some of this nonmalignant claim
3 will re-emerge, but it hasn't happened yet.

4 Q. But the point is, you've said you're data driven. You
5 didn't look behind the data to see -- to try and understand
6 what was driving those nonmalignant claims in Owens Corning
7 and other cases.

8 A. Well, I --

9 Q. You simply took the data as you found it and assumed that
10 the future would look like your calibration period.

11 A. And I -- I understood what was behind it in the sense
12 that the history of the pre-2005 asbestos litigation, had to
13 do with the earlier world of screening trailers. Whereas
14 Judge Jack pointed out, people went in at one end, had some
15 medical evaluation, and came out the other end and saw a
16 lawyer right at the steps of the screening trailers which came
17 to sites where people may have been candidates for being
18 exposed to asbestos. I don't think anybody could ignore that.
19 And we knew it too.

20 What we didn't know was that a federal judge in an MDL,
21 who had previously been a nurse, would look at the silica
22 claims which were before her and order a series of steps which
23 suggested that the silica claims -- claimants were the same
24 claimants who had been showing up in asbestos.

25 Interestingly, in terms of foresight in the Dresser case

1 which precedes these, there was also pressure from silica, and
2 we're the ones who said there should not be very many silica
3 claims and advised Halliburton of that. They ended up
4 therefore doing -- funding the silica trust which was formed
5 with a declining balance mode which goes on to this day.

6 We were right about the fact that there shouldn't be a
7 lot of silica claims. We didn't understand at the time
8 exactly what the link was, but Judge Jack did. And so we
9 learned from her opinion and watched the changes as they came
10 in.

11 Q. Right. You're aware, aren't you, that Dr. Bates at the
12 same time that you were predicting this sharp increase or this
13 continued onslaught of nonmalignant claims, he did look at the
14 underlying process that was driving those claims and he
15 predicted a sharp drop off in nonmalignant claims in the
16 future. You're aware of that, aren't you?

17 A. Well, I've heard it here relying on his SEC forecasting
18 material and not the theory he's relying on today.

19 But yes, I've heard that that was true here, and I
20 congratulate him.

21 Q. And you see that there is evidence that that was his
22 opinion before Judge Jack's silica litigation opinion?

23 A. Well I've heard what we all have heard here from the
24 SEC -- and from the SEC filings.

25 Q. Okay. Which were for the first one was 12/31/2004. Let

1 me -- and you talk about what you understand now about what
2 was driving those nonmalignant claims. But the point of this
3 is, you didn't look at that process before and try to
4 understand it. You simply took the past as prologue and
5 projected or extrapolated those into the future?

6 MR. GUY: Objection; asked and answered.

7 THE COURT: Go ahead and see if you can answer it
8 again.

9 THE WITNESS: It's not -- you keep implying that
10 we're wearing blinders or something like that. We're not. We
11 understand and have read -- we had seen Dr. Brickman's work
12 before, for example. We understood a lot of what the argument
13 was over the nonmalignant claims. And as I said, great for
14 Dr. Bates having predicted that in your SEC forecasting which
15 you now say is completely different than anything you're doing
16 in your bankruptcy projection, that the nonmalignants were
17 going to virtually disappear. We didn't feel free to
18 speculate on that until Judge Jack made her decision. I have
19 no hesitation.

20 Moreover, in the -- Judge Fullam asked for
21 variations, and following I believe those variations, those --
22 if the timing was right. I can't remember how the timing
23 works. He may have asked for and received revised numbers
24 once the reality was that the situation had shifted. But I
25 don't remember how the dates fit together so I'm not alleging

1 that that really happened.

2 BY MR. CASSADA:

3 Q. I want to talk with you briefly about another case that
4 you mentioned where a court relied on your work, and that's
5 the A.H. Robins case. Do you recall that was not an asbestos
6 case, right?

7 A. I recall.

8 Q. And in that case the debtor funded 100 percent trust and
9 its shareholders received a substantial distribution from the
10 bankruptcy case, correct?

11 A. Say that again?

12 Q. The debtors' in that case funded 100 percent --

13 A. You moved the slide forward, I think to the Robins --

14 Q. I'm not at the slide yet.

15 A. Oh.

16 Q. The debtors' funded 100 percent trust and the
17 shareholders received a substantial distribution in that; is
18 that correct?

19 A. In addition, Aetna funded an additional trust for the
20 late claimants.

21 Q. Right. And Aetna was one of Robins' insurers?

22 A. It was Robins' only insurer. This is not asbestos. They
23 had insured them since the 1890s for across the board property
24 casualty liability.

25 Q. Now that was a case -- now in that case, unlike this case

1 and some of the other work you described, you did not
2 extrapolate the past into the future, correct?

3 A. Well, first -- there are no futures in the A.H. Robins
4 case. There aren't any at all.

5 Q. There was no futures' representative appointed in that
6 case?

7 A. Not only was there not a futures' representative, there
8 were not future claimants. The A.H. Robins case has to do
9 with a contraceptive called the Dalkon Shield which A.H.
10 Robins bought and then sold, and by the time of the case that
11 product had been completely removed from the market so there
12 really were not future claims. There were late claimants, but
13 there was -- there were no future claimants. So there was no
14 future representative. I mean there was -- there was not
15 going to be the need for one. What was there was there.

16 Q. We can look at the case and determine whether or not
17 there was a future's representative --

18 A. I'm telling you there was not.

19 Q. Okay. Well the case will state whether there was one or
20 not. I know you -- but in any event, there were future claims
21 to be -- there were future resolutions to be made and claims,
22 correct?

23 A. Not in the sense that we use the term futures. I want to
24 distinguish between futures in the sense we use it in asbestos
25 cases, where we're expecting that these claims will go for a

1 very long time into the future.

2 We were not expecting that in the A.H. Robins case
3 because of the removal of this physical product. We're not
4 talking fibers in the air. This is a physical thing. And
5 when the case started, there was a lot of publicity about the
6 use of the product, and anybody who, you know, you would have
7 had to be not paying any attention in order for you to miss
8 the fact that these were being considered dangerous. And more
9 important than that, no one could get new ones, once this
10 started, so --

11 Q. Okay.

12 A. -- there weren't futures in the sense that we talk about
13 asbestos.

14 Q. Okay. Well let me focus you on the issue of the subject
15 that I'm interested in. There were pending claims, and in
16 that case there was a projection that had to be made -- the
17 resolutions of those pending claims. And the point is that
18 you did not apply -- merely extrapolate the experience for
19 claims that had been settled in the past to the pending
20 claims. You recall that, correct?

21 A. Well, we did produce an estimate.

22 Q. I understand that, but you did not extrapolate the
23 debtors' experience from the pending claims?

24 A. With regard to the claim values, we had a unique
25 advantage in that case which was not accessible to anyone

1 else. Our client had handled all the claims for A.H. Robins
2 for the Dalkon Shield. And the claims handlers who formed the
3 unit that was handling the Dalkon Shield claims before the
4 bankruptcy, were still at Aetna. And the enormous advantage
5 that we had, was that rather than estimating the values, the
6 court had provided very data-rich profiles which had been
7 vetted through neutrals and argued over.

8 So in essence, we had profiles of the individuals who had
9 previously received compensation. And I used that advantage
10 by asking those individuals who were handling the claims to
11 value actual claimants one by one, and then use those -- did
12 extrapolate those into the future.

13 Now Judge Merhige was skeptical about the validity of
14 that approach, and it was unique to that case but in the end,
15 he accepted it. And he was skeptical because he regarded
16 those claims adjusters as low ballers, which they usually are.
17 But we had anticipated that problem and done a lot of training
18 to suggest to them they were not to low ball the evaluations
19 of the pending claims. They needed to provide values which in
20 their world would ensure that they would settle very rapidly.
21 So our methodology was different.

22 But when you say we didn't extrapolate, we extrapolated
23 from a smaller number of cases that they valued and we entered
24 them into a matrix of the different injuries which women were
25 getting, to try and forecast what the total value of the case

1 was. So we did extrapolate from a sample of cases to the
2 universe using that injury matrix.

3 Q. Okay. But in that case you used the questionnaires
4 submitted to the court and determined that future cases would
5 not resemble the resolved cases, preventing an extrapolation.
6 Do you recall that? And this is --

7 A. I'm reading here because that just went up.

8 Q. This is testimony, you said "Well because I found that
9 the distribution of injuries in the pending cases was quite
10 different than the distribution of injuries in the resolved
11 cases, and also, in many ways of equal or more importance, I
12 found that the presence of complicating factors was much
13 greater in the records of the claimants in the McGovern
14 process in the pending sample than in the resolved sample. I
15 knew that it would be very difficult to do a kind of
16 simple-minded translation of the values for the resolved cases
17 to the values for the pending claims, because the claims'
18 handlers and plaintiffs' lawyers were looking at -- in a world
19 of prepetition resolution that was going to turn out to be
20 very, very different than the world that was being looked at
21 in the pending cases." Correct?

22 MR. GUY: Your Honor, same objection --

23 THE COURT: Overruled.

24 THE WITNESS: I see it. I can't say I remember
25 exactly back to 1997 what the exact circumstances were, but I

1 do see it.

2 BY MR. CASSADA:

3 Q. So you used the questionnaires in that case, and you
4 concluded from the questionnaires that the pending cases
5 didn't resemble the past resolved cases?

6 A. The reason that I used the questionnaires there, was that
7 Judge Merhige had set up an elaborate process to ensure what
8 I've been calling second-level agreement. There was a special
9 master, Francis McGovern now at Duke University Law School,
10 and he had neutrals who were assisting him.

11 I would say -- I can't see around this, but Dr. Peterson
12 and Dr. Relles were his neutrals, and their responsibility was
13 to develop a database which all the parties to the case, the
14 insurer, the debtor, the plaintiffs, and there's a fourth
15 party in there somewhere, the unsecured creditors, probably,
16 would agree on. And there was almost a two-year process in
17 which the questionnaire responses were data entered by the
18 neutrals. Everyone looked at them. We fought about what was
19 correct and what was not correct. And until we reached
20 disagreement that was fatal, we didn't see the judge. But we
21 did -- when there was disagreement, see the judge and the
22 judge decided.

23 I mean, this was a case in which the disagreement on the
24 data collection was about such things as whether we would be
25 able to ask the debtor how many sexual partners an individual

1 claimant had. And plaintiffs -- debtor, yes; plaintiffs no;
2 Judge, I believe, yes. When all of that was done, a set of
3 neutrals put up the data in a database which was distributed
4 to everyone, and I believe there was second-level agreement,
5 that is, everyone believed that the data was what had been in
6 the questionnaires and it was reliable and that was the basis
7 for everybody's estimate.

8 Now, once that data was up, I had these claims adjusters
9 at my ready, and nobody knows better than they do what the
10 elements that they see in these complex individual files was.
11 So I used that advantage. But it's a different circumstance.

12 Q. The case is a different circumstance --

13 A. It had no futures.

14 Q. -- and the methodology was different.

15 And the Fourth Circuit opinion that you cited, the Fourth
16 Circuit reviewed what you actually did with the
17 questionnaires.

18 And the opinion states that you took the return
19 questionnaires as a representative sample and weeded out those
20 for example with no medical proof of the use of Dalkon Shield.

21 So you weeded out claims like Dr. Bates in this case
22 weeded out claims of people who never -- who couldn't identify
23 Garlock products?

24 A. Well, actually --

25 Q. You classified --

1 MR. GUY: Let her answer the question asked.

2 THE COURT: All right.

3 MR. CASSADA: I haven't asked the question yet.

4 Q. You classified the claims that arose with and without
5 complications and the nature of injury claim. And the Fourth
6 Circuit went on to observe that Dr. Rabinovitz further
7 concluded that she thought there might be a considerable
8 reduction from disallowance of claims. That same reduction is
9 not unreasonable -- that some reduction is not unreasonable is
10 illustrated by a remark we have come across in the record that
11 one claimant apparently said she took two Dalkon Shields a
12 day.

13 So you studied the questionnaires in that case, and you
14 made judgments about meritorious claims and you eliminated
15 claims from a questionnaire population on that basis.

16 MR. GUY: Objection --

17 BY MR. CASSADA:

18 Q. Correct?

19 MR. GUY: If that's a question, it's compound,
20 narrative and vague.

21 THE COURT: If you can answer --

22 THE WITNESS: Let me take this question paragraph by
23 paragraph because I can't answer it as a whole and it
24 shouldn't be answered as a whole.

25 The court is saying -- the appeals court is saying

1 that we weeded out those with no medical proof of the use of
2 the Dalkon Shield. Actually, if you look at the report, you
3 will see that we estimated compensating a much larger group of
4 claimants than the debtor did. And that is because we knew
5 that these devices had been widely distributed to medical
6 services at women's colleges. I used to call this group of
7 claimants my Wesley moms -- Wesley gals, rather.

8 They could not produce proof of the use of the
9 Dalkon Shield because the university clinics had destroyed the
10 records. They moved through very fast, every four or five
11 years as classes move out. And so we did make a higher
12 estimate, based on people with no medical proof. Because it
13 was probable from their later experience that they had used
14 the Dalkon Shield.

15 So with all due respect to the appeals court, if you
16 look at the detail of our report, we actually increased the
17 estimate of compensable claimants to include a proportion of
18 those who could not prove that they used the Dalkon Shield.

19 The second paragraph is correct. They were classified
20 according to the complication and the nature of the injuries
21 claimed, but they missed the fact which is in the report, that
22 some of those folks with no proof were allowed and did receive
23 compensation.

24 BY MR. CASSADA:

25 Q. Are you finished?

1 A. Yes, sir.

2 Q. Okay. In this case though, you did not use any of the
3 information obtained from current claimants through the
4 claimant questionnaires, correct?

5 A. I did not.

6 Q. Okay. And you -- I think you said you determined that
7 they were unusable. How many did you look at and how many
8 contained what you described as contradictory information?

9 A. I can't tell you. We pulled a sample, looked at them.
10 Couldn't really reach a decision about whether the information
11 was showing exposure or not showing exposure. Didn't have
12 recourse to the neutral process to reach second-level
13 agreements, so that all the experts could be using the same
14 database, and were not comfortable in the absence of such a
15 process, accepting Dr. Garcia and Dr. Bates' judgment.
16 Although they're perfectly excellent analysts and database
17 developers, but we were not comfortable in using those
18 judgments, and therefore didn't use them.

19 Q. Did you see the correspondence from lawyers saying that
20 their clients were in the database, didn't have claims against
21 Garlock or didn't have mesothelioma?

22 A. I don't remember whether we saw that or not. We were
23 looking primarily at exposure-related issues since that was
24 sort of the core.

25 I wish that there had been some neutral process in which

1 Bates White sent out a letter and said in advance, we're going
2 to take out the following individuals for the following
3 reasons on perfectly uncontroversial grounds and we're sending
4 you their names, we're sending you the backup, because we'll
5 need, down the line, second-level agreement. We're putting
6 this forward to you and we should have a meeting or, you know,
7 we should get together. But that didn't happen. So we were
8 not comfortable making those decisions on our own. We're not
9 a jury.

10 Q. All right. So, I mean if that -- if that did happen, you
11 don't know about it?

12 A. I know that some of the claims that he removed, he
13 alleged had -- or they both alleged had made those findings.
14 But he bases his analysis, mainly on a much more complicated
15 set of decisions about exposure through the matrix provided by
16 Dr. Henshaw.

17 Q. But my question's a little bit different. That is, if
18 the debtors did send around a list of people who had returned
19 the questionnaires or responded that they didn't have claims,
20 or they didn't have claims against Garlock or didn't have
21 mesothelioma, you're saying that if that did happen, you don't
22 know about it?

23 A. I never received a list which said the following 10 named
24 individuals should be removed from the database because
25 they've said they don't have mesothelioma.

1 Q. Okay.

2 A. Or they don't have something else. I don't -- if there
3 was such a process, we were not a part of it.

4 Q. Okay. And so I take it you didn't use the supplemental
5 exposure questionnaire or the supplemental payment
6 questionnaire responses either?

7 A. For the same reason.

8 Q. Nor did you use the data that Garlock received from the
9 Delaware Claims Processing Facility?

10 A. I've already described the fact that -- that we looked at
11 more closely.

12 Q. But you decided that it was incomplete because Garlock
13 didn't get all the data it wanted?

14 A. Well, it didn't get all the data, yes.

15 Q. And I believe you acknowledge that it requested the data,
16 but didn't get it?

17 A. I did.

18 Q. Okay. Let me shift subjects then. Just to understand at
19 the core of your estimation approach, you're predicting what
20 it would have cost Garlock to resolve claims principally
21 through settlement in the tort system, correct?

22 A. Settlement and verdicts, we followed the data.

23 Q. Okay. So -- so that's it. You're focused on the tort
24 system and you're estimating what the payments would have been
25 in the tort system?

1 A. That is correct. And we're following what we believe the
2 Eagle-Picher precedent suggests that we do.

3 Q. You described your work in your deposition as predicting
4 the value of a future stream of agreements?

5 A. Well, we tried to do what the Judge asked us to do. And
6 I believe that was in a context in which you were trying to
7 get me to say that these were contract claims. And I can't
8 say that because I'm not a lawyer. I'm not comfortable using
9 legal terms. Sometimes they slip in, but it isn't
10 intentional.

11 Q. Okay.

12 A. So I read to you yesterday -- no, not yesterday, Friday,
13 the passage from the estimation order, and what it suggests is
14 that what we should be estimating is the aggregate value of
15 payments. I may have gotten into something slightly different
16 because I was trying to avoid using the word "contract".

17 Q. So -- but in any event, in this case, you're applying the
18 same methodology and measuring the same thing with the
19 exception of the defense costs issue that you did in prior
20 cases where you were engaged?

21 A. Yes.

22 Q. Okay. And on Friday you went through numerous previous
23 cases where you had actually rendered opinions. Do you recall
24 whether in any of those cases the debtor disputed that its
25 product caused disease?

1 A. Can you put the list up again? I can only think about --
2 can you put the list up?

3 Q. Sure.

4 A. Let's look --

5 Q. These are court-appointed FCRs?

6 A. Right.

7 Q. In each of these cases except for Congoleum, isn't it
8 true that there had been an agreement reached between the
9 debtor and -- the claimants and the debtor was not raising any
10 issue in that case about whether its product actually caused
11 disease, correct?

12 MR. GUY: We have no agreement with Garlock.

13 MR. CASSADA: I just said with the exception of that
14 case.

15 THE COURT: You said Congoleum.

16 MR. CASSADA: I misspoke, thank you for correcting
17 me, Mr. Guy.

18 THE WITNESS: Okay. So in the cases which -- in the
19 cases in which I did not testify Lummus, AC and S. Congo,
20 Thorpe, Plant, THAN, there are always allegations that the
21 debtor has often taken the position that its product didn't
22 cause any damage or didn't cause anything. But there's no
23 adjudication of that.

24 In Celotex and Carey Canada, as I think I mentioned,
25 there was no data on the past. But Carey Canada is a leading

1 asbestos miner. So a lot of that case had to do with mining.
2 I think no one alleged that Carey had not produced a product.
3 It's more ambiguous about Celotex.

4 Q. But can you recall any specific case or you're not aware
5 of any specific case, are you, where the debtors actually
6 disputed that their products caused mesothelioma?

7 A. Well, I'm looking here, for example, there are some.
8 Let's talk about Lummus at the start since it's up there at
9 the top of the deck -- top of the list. Lummus did dispute
10 that. Lummus has two, as I remember, streams of exposure.
11 One was a business they had been in long ago, and it had to do
12 with the provision of products of power plants. But the other
13 business is a design business for industrial operations.

14 So Lummus disputed that the design of the facilities
15 which were eventually constructed based on the designs they
16 had provided, had nothing to do with actual exposure to a
17 product, and that's one of the things that the trust -- that
18 case settled, and that's one of the things that the trust has
19 to deal with.

20 Q. But your estimation work in that case was after the
21 settlement had been reached?

22 A. No, it had not -- the --

23 Q. Settlement with the actual debtor?

24 A. Well, that's -- I don't know what you mean. Lummus was
25 included as an asset in the Combustion Engineering litigation.

1 And the appeals court said, you can't just toss a company into
2 bankruptcy so that it can be used as a payment stream.

3 Q. That was the Third Circuit's decision in the Combustion
4 Engineering case?

5 A. Correct, for Combustion Engineering. So Lummus came out
6 and had to be separately estimated and a separate value placed
7 on its claims. And one of the ambiguities was -- was there
8 were very few of those early industrial claims, and it was in
9 the design business. And at that stage its positions -- its
10 position, not necessarily CE's position was -- its design had
11 nothing to do with it --

12 Q. Excuse me. I may have asked a question and I would like
13 to reframe it if I can --

14 A. Sure.

15 Q. -- just to make this a little more efficient.

16 A. Sure.

17 Q. In all these other cases, there has been agreements
18 reached before the estimations that you worked on that had
19 actually taken place; isn't that correct?

20 A. No.

21 Q. There had been agreements reached with the debtor company
22 that allegedly had the liability?

23 A. Well, I'm just saying that's not true with Lummus. It
24 came out, and therefore an independent estimate had to be --
25 had to be made.

1 Q. But that was an estimate that had to be made in order to
2 confirm a plan based on an agreement with Lummus about the
3 amount it would fund it for a trust, correct?

4 A. I -- you may know more about this than I do.

5 Q. Okay.

6 A. But I do not recall Lummus having been resolved in
7 advance of -- after the Circuit rejected the original plan on
8 the basis that it wasn't being contributed not to cover its
9 own liability, but it was being contributed to cover the
10 liability of Combustion Engineering. Then it came out and the
11 question put to us was, what is its liability. And as I said,
12 it had two streams. One was a pretty conventional industrial
13 product. And the other was this design business, and we were
14 asked to estimate both. And the trusts -- it has two pieces
15 to its trust, one for one product and one for the other.

16 Q. Okay.

17 A. And it did -- it did indicate that the design business
18 shouldn't be included.

19 Q. Let me ask you another question.

20 You -- focusing on your methodology. You assume under
21 your methodology that defendant's settlements are
22 acknowledgments for their liability for the claims settled,
23 correct?

24 A. I understand that you're arguing that as a legal matter
25 that is liability. We do assume that the plaintiffs and the

1 defendants have exercised and -- exercised all their arguments
2 and received all the information that they're going to receive
3 before they make a settlement, and that that process has led
4 the defendant -- the defendant to say at that time, yes, we're
5 responsible for this injury. Maybe not wholly, but we are
6 responsible. We participated in the causation of this injury.

7 Q. And that's at the core of your methodology, correct?

8 A. Well, settlements certainly are at the core.

9 Q. But the idea that when the defendant settling the case --
10 it's saying to the plaintiff, yes, I caused your injury and
11 that's why I'm paying you this money. That's at the core of
12 your methodology, correct?

13 MR. GUY: Objection; mischaracterization.

14 THE COURT: Overruled.

15 THE WITNESS: Everybody has satisfied the
16 information requirements they wish to have enough, so that the
17 company says, this is my responsibility and the plaintiff's
18 lawyer says, whatever their responsibility is reflected in the
19 amount that they are responsible for paying. Both sides have
20 information. Both sides have negotiated with each other.
21 They're informed. They're talented. They're not settling in
22 the complete absence of information. Quite the reverse. You
23 don't want to call that liability. And I'm sure as a legal
24 matter I'm not equipped to define liability in that way. But
25 they have information about the exposure and that leads to a

1 financial agreement.

2 BY MR. CASSADA:

3 Q. And but it's key to your understanding of settlements
4 then, and when you're referring to liability, you're referring
5 to a process where you understand that the defendant is
6 acknowledging that the defendant's product caused the disease
7 and is actually at least implicitly saying that they haven't
8 settled --

9 MR. GUY: Objection; asked and answered. The
10 witness has already said she's not a lawyer. She's not making
11 determination as to legal liability --

12 THE COURT: Sustained.

13 MR. GUY: And Your Honor, we --

14 MR. CASSADA: Let me just refer to --

15 THE COURT: Go ahead, Mr. Guy.

16 MR. GUY: Your Honor, we agreed that we would put
17 Dr. Rabinovitz on Direct for two hours. That was an agreement
18 reached with all counsel. I tailored my Direct for that exact
19 purpose. And I understand the Court's entered Orders in terms
20 of the time. And the Debtors are seemingly incapable of
21 presenting their case in time of the Order. But I do expect
22 them to honor that agreement. And by my watch, they are two
23 minutes late.

24 THE COURT: Okay. Wrap it up.

25 MR. CASSADA: Your Honor, there was no limit placed

1 on their ability to cross-examine our estimation experts. She
2 is one of the most important witnesses in the case.

3 MR. GUY: Your Honor, we had an agreement two
4 hours --

5 MR. CASSADA: We did not have that agreement, Your
6 Honor --

7 THE COURT: Well, I'm going to stop and let her go
8 in about five minutes, so let's get on with it.

9 BY MR. CASSADA:

10 Q. You concluded in your opinion, did you not, Dr.
11 Rabinovitz that the claiming rate from a KPMG incidence model
12 against Garlock would be 80 percent, right?

13 A. 79.09 percent, correct.

14 Q. Okay. And I believe you actually used 89 percent in your
15 report; is that correct? Or 80 percent or let's say 79. So
16 just to be clear, what you're saying there is that of the
17 projected incidence that you used for occupational exposed
18 people, the projected incidence of mesothelioma, you are
19 predicting that 79 percent of those people will actually make
20 a claim against Garlock in the future?

21 A. Yes.

22 Q. And in 2010 you found or concluded from the data that
23 94 percent of all of the occupationally exposed people in your
24 incidence model who develop mesothelioma, will assert claims
25 against Garlock that Garlock contributed to the mesothelioma.

1 Is that -- do I understand that correctly?

2 A. Two things -- three things. First, these high numbers
3 are not unusual. We see them among solvent defendants who are
4 not in bankruptcy. This is not the only situation which we
5 have seen these high numbers.

6 Second, as I said previously, the 2010 partial year is
7 not to be relied on too heavily. We combine it with the 2005
8 partial year '6, '7, '8 and '9 which are complete years. And
9 I think those are better indicators because they are time
10 variations. There are differences during the year, everybody
11 seems to operate -- there's a big rush at various times during
12 the year. So the half years are -- can be, if used alone, a
13 little bit misleading.

14 Q. Just to put your opinions in perspective. You were
15 saying that Garlock -- that four out of five claimants in
16 every future year are going to claim that Garlock contributed
17 to their illness. That's what you're saying?

18 A. That's what the data seems to show.

19 Q. And that 94 percent did during the six months -- I know
20 you say that's not something you rely on.

21 A. Yes. And I also said you look at solvent defendants all
22 the time, this is not unique to Garlock.

23 Q. So it would follow, wouldn't it, that if Garlock's going
24 to receive four out of five claims, that those same claimants
25 are going to be making claims against all these other

1 companies, many of whose liability you estimated, correct?

2 MR. GUY: Objection; calls for speculation.

3 THE WITNESS: Yeah, I mean --

4 THE COURT: Answer it if you can.

5 THE WITNESS: The answer is, I don't know. I do not
6 think it is unique, is what I'm saying.

7 How the claimant -- pattern of claiming -- this is a
8 mixture of -- just trying to look -- these are -- I'm not sure
9 this is a list of companies and a list of trusts, it's a very
10 mixed list, so I'm not sure what it's meant to suggest.

11 BY MR. CASSADA:

12 Q. But you would have to agree, wouldn't you, that if
13 Garlock's getting 80 percent of these claims and you testified
14 a very small number each year, you would reasonably expect
15 that for any given mesothelioma claimant who sues Garlock,
16 they all have claims against a substantial number of these
17 other companies, many whose liability you estimated?

18 A. That doesn't mean they're going to pay them. Remember,
19 we say that the claims payment rate is 56 percent, and it
20 varied here, and it varies for these other companies. Just
21 because people make claims against one of these listed
22 companies or trusts, does not mean that they're going to pay
23 them.

24 Here we say, I believe, 46 percent are zeros. So yes,
25 there are a lot of claims. In asbestos there are always a lot

1 of claims. Garlock set itself up in a quite interesting way
2 to organize a process to evaluate those claims. Just because
3 they're filed, did not mean -- and we're forecasting -- will
4 not mean in the future that all of them will get paid. Half
5 of them won't get paid more or less.

6 Q. Okay. But there are a lot of -- and a substantial number
7 of these claimants who bring claims against Garlock will be
8 paid by these trusts, correct?

9 A. I do not know that.

10 Q. But you know that, I mean, just simple mathematical
11 principles would tell you that that would be true, right?

12 MR. GUY: Objection.

13 THE WITNESS: I don't -- you'll have to do better
14 than simple mathematical principle. I do not know that.

15 BY MR. CASSADA:

16 Q. But you're the estimator for the futures rep for a
17 substantial number of these cases, and you have the data. You
18 know how many --

19 THE COURT: If you want to spend your remaining
20 minutes arguing with her, go ahead. But if you got some
21 questions, that would be more productive.

22 BY MR. CASSADA:

23 Q. So we've established in this case you have no opinion on
24 the average number of responsible parties in a case against
25 Garlock, correct?

1 A. I do not.

2 Q. Okay. And given the nature of Garlock's product and the
3 nature of occupations, does it strike you as a reasonable --
4 reasonable that Garlock might expect to share liability with
5 22 of these trusts as predicted by Dr. Bates?

6 A. I do not know.

7 Q. You got no basis to dispute that, correct?

8 A. Well, I don't think --

9 THE COURT: She said she didn't know. I think
10 that's sufficient.

11 MR. CASSADA: Okay.

12 Q. Do you really think that it's reasonable that if Garlock
13 was taken to trial by claimants, that Garlock would be
14 expected to receive half of the liability in every case?

15 A. I'm not a jury. I'm not a judge, and I'm not going to
16 speculate about what will happen in particular cases.

17 I'm probably -- of most of the people sitting in this
18 room today, the individual cases are not my problems. I'm not
19 a plaintiff's lawyer. I've never brought a case to trial. I
20 can't tell you what will happen in those cases.

21 Q. So it's not your opinion, then, that if Garlock went to
22 trial, that it would be expected to be found liable with just
23 one other or two other defendants in the case?

24 A. Again, I can't -- I'm not well-equipped to predict trial
25 outcomes. I'm not a lawyer.

1 Q. Okay. Let me ask you a few simple short questions and
2 try to wrap this up. Just to be clear, you've not attempted
3 to measure in your estimation opinion the number of persons
4 whose mesothelioma was caused by Garlock's product, correct?

5 A. Caused. I am not a epidemiologist or a medical doctor,
6 so I am not making a decision on medical causation.

7 Q. And you've not analyzed the total damages that
8 mesothelioma claimants might recover in cases against Garlock,
9 correct?

10 A. I don't have data about all these other parties, and
11 therefore I have not.

12 Q. You haven't formed an opinion as to the total number of
13 responsible parties in a typical mesothelioma case, correct?

14 A. I have not.

15 Q. Nor have you attempted to determine the total number of
16 responsible parties in a case where Garlock might be found
17 liable, correct?

18 A. I don't believe it's possible to do that, given the
19 current status of information sharing. I've tried to generate
20 information sharing in a number of past circumstances, but it
21 hasn't happened. So I don't see how I could answer that
22 question without that kind of information sharing.

23 Q. You also have no opinion on the typical claimant's
24 likelihood of succeeding in a case tried against Garlock, do
25 you?

1 A. I'm not a trial lawyer.

2 Q. Okay.

3 A. So how could I have that opinion responsibly?

4 Q. Nor as I understand it do you have an opinion on the
5 aggregate amount of money that a typical mesothelioma claimant
6 against Garlock will recover from trust, correct?

7 A. Again, look at the list that you have up. Do I have
8 information about all of those and the recoveries the
9 claimants are getting? No, I do not. I don't see how I could
10 do it without that information.

11 Q. And your opinions in this case are based on your belief
12 that asbestos litigation is an industry, correct?

13 A. Yes.

14 Q. And therefore, that the claims follow the profit motives
15 of the persons involved in the industry?

16 A. Well, I'm comparing -- you have put up several times --
17 popped up here -- the law and economics model for thinking
18 about this industry in terms of individual plaintiffs and
19 lawyers and their individual negotiation. I do not believe
20 that that is a good characterization of how this industry
21 operates. It has a number of players and I've tried to expand
22 the list, who are all operating simultaneously, and their
23 actions and interactions in this market for claim resolution
24 are not individual actions. These are not individual cases.
25 Occasionally a case will go to trial as an individual case.

1 As I indicated my experience is that the general counsels
2 take those cases up because they're trying to change the law
3 and they think they have a fact situation. But when they're
4 finished -- let's assume for the moment that they succeed in
5 changing the law, then what they want to do is increase their
6 bargaining power with the plaintiff's law firm, in this
7 industry, so that they can convince large groups of
8 plaintiffs' lawyers that it no longer pays to make the
9 argument that they are making, and will somewhat reduce the
10 cost of their settlements.

11 This is not a case in which an individual claimant or
12 plaintiff and his lawyer, an individual defendant and his
13 lawyer are negotiating individual cases in isolation from this
14 gigantic situation in which asbestos is actually conducted.

15 We could go further. We could say in this industry there
16 are different kinds of participants on the plaintiff's side.
17 There are firms that only try cases. You had Mr. McClain
18 here. Kazan McClain is a firm that takes a very small number
19 of cases and tries an awful lot of them. There are firms that
20 never try cases. They're completely different and they
21 operate in completely different ways. And there are some
22 firms that are intermediate.

23 So there's a differentiated group of players on the
24 plaintiff's side. There's the property casualty insurers.
25 There's the parents and the debtors. Not everybody is set up

1 that way. Some of these companies are simply adjudicating
2 their own responsibility.

3 Dr. Peterson was saying there are peripheral defendants
4 and central defendants. I mean, the interaction among all of
5 these players is not a matter of individuals bringing cases in
6 the traditional Chicago-style law and economics mode. These
7 are not individuals. This is an industry operating a mass
8 tort. It's very different.

9 Q. So when the one product leaves the system, the means of
10 production in the industry shifts to other products, correct?

11 A. Well, the products are all out there already. So it's
12 not that someone is going to produce, I would imagine, a new
13 asbestos product. I think everybody knows that would be a
14 really bad idea.

15 But there's continuing investigation of products where
16 some have gone to trusts, others have not, and the interaction
17 among these pieces continues.

18 But all I'm saying is, these are not -- this business
19 about thinking about these as individual cases is not an
20 orientation I share.

21 The Chicago school may have a long and distinguished and
22 important theoretical history, but that's not what's happening
23 here.

24 Q. When you described this industry to me in June, you were
25 talking about how the focus of the means of production in the

1 industry changed based on where the profits could be obtained.
2 So the means of production shifted from one product to another
3 when the product disappeared?

4 MR. GUY: Your Honor, asked and answered.

5 THE COURT: Go ahead. Let's wind this up.

6 MR. GUY: They're 10 minutes over their agreement.

7 THE COURT: We'll stop in a minute.

8 THE WITNESS: I don't think I used the term, "means
9 of production" so you'll have to show it to me.

10 BY MR. CASSADA:

11 Q. You talked about market share either --

12 A. I think I said market share, not means of production.

13 Q. Okay.

14 A. But that's the reason you have to show it to me.

15 Q. Okay. Let me show you your testimony and then we'll just
16 have a couple of questions to wrap this up. Thank you. You
17 were focused on market share when you gave this explanation.

18 (Deposition playing.)

19 MR. GUY: Your Honor, this is just -- Mr. Cassada
20 will go on, and on, and on, and will not stop.

21 THE COURT: Okay. Sit down. Finish this up.

22 (Deposition was playing while counsel were talking.)

23 BY MR. CASSADA:

24 Q. So Dr. Rabinovitz, before Garlock's bankruptcy case, then
25 Garlock was the focus of the means of production. It was

1 targeted, is that -- is that your correct -- that's why it was
2 getting a market share that was 94 percent of the six months
3 before the bankruptcy case?

4 A. It isn't -- there are other solvent defendants getting
5 similarly high volumes of cases. The interest is not in the
6 volumes which are received, but the volumes which are paid.
7 What I'm saying here is, Garlock only historically paid about
8 half of the cases that it received.

9 Because of the way this market functions, it's not
10 surprising that the plaintiff's bar is going to file against
11 lots of companies, very large numbers of cases. Then the
12 company is going to develop a way of handling those. And
13 we've been told that for this company, there's a driver case.
14 And I assume what that means is, there's a big case and it
15 drives both value and settlements of large numbers of other
16 cases. Doesn't mean that all those cases are going to get
17 paid. In the case of Garlock, half of them, if history
18 repeats itself, are not getting paid. But that doesn't
19 prevent the plaintiff's bar side of the equation from filing
20 all of these -- filing volume because it gives them some
21 leverage. And the company, by the same token, isn't forced to
22 pay on, and historically has not paid on, about half of those
23 cases.

24 So the volume is a reality at the point that it occurs,
25 but it doesn't necessarily suggest all those cases will be

1 paid. The companies will then sort out the cases that they
2 choose to settle, either in groups or the mesothelioma cases
3 some of them one by one, and pay the portion for which they
4 think they want to make settlement.

5 Q. Now that Garlock is in bankruptcy then, would it be true
6 that the means of production have focused elsewhere?

7 MR. GUY: Objection, Your Honor. He keeps on
8 misstating the testimony to try to get some --

9 THE COURT: Sustained. Let's knock this off.

10 MR. CASSADA: Yeah. Let me ask one question --

11 THE COURT: One question and we're out.

12 BY MR. CASSADA:

13 Q. And then I'll -- is it -- would it be true under your
14 view that no amount that Garlock pays under the plan will
15 decrease amounts that claimants can collect from defendants in
16 the tort system?

17 A. Say that again? I didn't --

18 Q. Is it true that the amounts that -- any amount that
19 Garlock pays under the plan will not decrease the amounts that
20 claimants can collect from defendants in the tort system?

21 A. I don't know.

22 MR. CASSADA: Your Honor, I have to cut my
23 examination short in deference to the Court's instruction.

24 THE COURT: That's fine. We'll take a break until
25 11:30. You may step down.

1 THE WITNESS: Thank you.

2 MR. CASSADA: Your Honor, I do have some exhibits I
3 want to introduce. I can do that after the break.

4 MR. GUY: Your Honor, is it clear that we're going
5 on the Debtors now for the rest of the day so we can allow
6 Dr. Rabinovitz to go home.

7 THE COURT: Yes. Thank you.

8 MR. GUY: Thank you.

9 (A brief recess was taken in the proceedings at
10 11:19 a.m.; court resumed at 11:29 a.m.)

11 THE COURT: Tag, you're it.

12 MR. SCHACHTER: Well, if that's the case, I tag
13 Dr. Elizabeth L. Anderson, please.

14 ELIZABETH L. ANDERSON,
15 Being first duly sworn, was examined and testified as follows:

16 DIRECT EXAMINATION

17 BY MR. SCHACHTER:

18 Q. Dr. Anderson, would you please introduce yourself to the
19 Court?

20 A. Yes. I am Elizabeth Anderson. I am currently Group Vice
21 President and Principal Scientist at Exponent, which is a
22 public services company.

23 Q. You might want to move that microphone a little closer.

24 A. Certainly.

25 Q. Yeah, that will help.

1 A. All right.

2 Q. Thank you. You have a Ph.D in what field, ma'am?

3 A. My Ph.D is in organic -- mechanistic organic chemistry,
4 which is the chemistry of designing molecules to make them
5 effective such as for pharmaceuticals.

6 Q. And you're a fellow of ATS, what is that?

7 A. That's the Academy of Toxicological Sciences. I have a
8 certification in toxicology.

9 Q. In briefest summary, what has been the focus of your
10 career?

11 A. My career has been focused on evaluating exposures, and
12 the likelihood of those exposures from whatever source, the
13 environment, from foods, occasional pharmaceuticals, to impact
14 public health. And I have been instrumental in effecting and
15 establishing methodology of risk assessment as a process for
16 making these evaluations.

17 Q. We've called you here on the rebuttal part of this case,
18 and I know you've done a lot of work and prepared reports, but
19 I want to focus solely on two issues during your direct
20 examination today.

21 The first is a question that has arisen based on Dr.
22 Rabinovitz's claims about the WR Grace Zonolite attic
23 insulation case. Do you have information about that?

24 A. Yes, I do.

25 Q. And the second is an accurate understanding of the public

1 health risk assessment literature discussed in both the Grace
2 case and alluded to by a number of committee experts in the
3 past weeks.

4 Do you have information, and can you help us understand
5 that literature?

6 A. Yes, I certainly can.

7 Q. Briefly your education is, what, ma'am?

8 A. My Ph.D is in mechanistic organic chemistry. I began my
9 career at the College of William and Mary as a premedical
10 student with equal training in biology and chemistry, chose
11 chemistry eventually as a major. And I attended University of
12 Virginia for my Master's degree in mechanistic organic
13 chemistry.

14 Q. You had a long career with the EPA. Could you describe
15 some of the more significant things you did while you were at
16 EPA and some of the more significant positions you held there?

17 A. Yes, I'll be glad to do that. At EPA in the early years
18 we were challenged, because there was a perception that
19 carcinogens were a particular force and that there was an
20 epidemic of cancer caused by environmental exposures. There
21 was a great deal of focus, I was asked to be responsible for
22 developing the agency's cancer policy. I directed the
23 development of the first guidelines for risk assessment in
24 EPA.

25 Subsequently those were published in the Journal of

1 National Cancer Institute, I'm a co-author, as well as in the
2 Federal Register.

3 I founded and directed the Carcinogen Assessment Group
4 which implemented those guidelines, and led that group and the
5 expanded central risk assessment activities in the EPA for the
6 next 10 years.

7 And I directed, specific to this case, the first internal
8 risk assessments in asbestos beginning in the late '70s, with
9 the reserved mining case, and eventually the internal risk
10 assessments for asbestos until we developed, in 1986, risk
11 assessment document which was published shortly after I left.

12 Q. Have you been involved in co-authoring risk assessments
13 over the years?

14 A. Yes, I have. I co-authored hundreds of EPA's risk
15 assessments on every toxicant, and I have continued work in
16 this field since then.

17 Q. You mentioned that you were involved in some early
18 efforts to systematize how risk analysis was done by
19 regulatory agencies. Is there a particular document that has
20 become important to that process, and can you describe your
21 participation with that document?

22 A. Yes. EPA was a pioneer in this field. And it became so
23 important and central to all of the federal agencies, that the
24 National Academy of Sciences was asked to review this
25 methodology and to either endorse, or to criticize what was

1 being done.

2 By the time this committee was convened in 1983, I had
3 co-authored about 150 risk assessments at EPA. This document
4 is considered the benchmark in risk assessment and is referred
5 to as such. It was published -- I was an adviser to this
6 committee, I was still at EPA, and it established and endorsed
7 the paradigm that mimics what we were doing at EPA, but
8 codifies in a full-step paradigm that's regularly accepted
9 today.

10 Q. You left EPA in 1985 or '86; is that correct?

11 A. Yes, I actually left early in '86.

12 Q. And since then, have you continued in your career to
13 focus on issues of risk assessment, and be involved
14 internationally, in that subject?

15 A. Yes, I have.

16 Q. Could you describe that?

17 A. I was a founding member of the Society of Risk Analysis,
18 which is today the leading society -- professional society in
19 the field. And it includes scientists in health sciences,
20 engineering sciences, public -- social studies, public
21 perceptions of risk.

22 I subsequently was president of the society, then I
23 served as editor in chief of the flagship journal of the
24 society, which is the leading journal internationally on
25 topics in risk analysis for 10 years. This journal at the

1 time I left had a worldwide circulation of more than 4,000
2 subscribers, circulated in 80 countries. And the editorial
3 board and the authors included scientists in all areas from
4 academic communities, governmental communities, private
5 sector. And it's one of the highest ranking peer-reviewed
6 journals as measured by its impact factors.

7 Q. Have you been published in the peer-reviewed literature
8 on risk assessment?

9 A. Yes, I have. I have published over many years, many
10 articles in risk analysis.

11 Q. And have you lectured worldwide on issues of risk
12 analysis, public policy and the application of risk analysis
13 to public policy?

14 A. Yes, I have. I have lectured in -- as my resume
15 describes, in virtually every major university in the United
16 States. I have been invited abroad to lecture on risk
17 analysis on public health issues and risk assessment by the
18 Pan American Health Organization, by European groups including
19 the World Health Organization. I've served on committees for
20 the World Health Organization. I've been invited to speak in
21 developing countries, Southeast Asia countries on these topics
22 as well.

23 Q. Since you left the EPA, you've been involved in private
24 consulting; is that correct?

25 A. I have.

1 Q. Have you maintained your associations with these public
2 health agencies, served as a contractor to them, or an adviser
3 on committees for them?

4 A. Yes, I have.

5 MR. SCHACHTER: Your Honor, I tender Dr. Anderson as
6 an expert in toxicology, risk analysis, and the application of
7 risk analysis to public health issues.

8 MR. FINCH: No objection with that limitation, Your
9 Honor.

10 THE COURT: Okay. All right. She will be so
11 accepted.

12 BY MR. SCHACHTER:

13 Q. On Friday, Dr. Rabinovitz testified, and this is the
14 first subject I wanted to deal with. At page 4155 of her --
15 of the testimony, she was asked about the Grace opinion, the
16 Zonolite opinion in Grace. And she was asked whether she
17 remembered it. She said she did. And she was asked what
18 the -- on Direct, was she aware of the Court's ruling.

19 And she said that the Court found that Zonolite did not
20 cause the kinds of asbestos-related diseases that we are
21 talking about here, unless it was disturbed.

22 Counsel for the future claims representative asked her,
23 so the key issue was whether it was disturbed or not?

24 And she answered, yes.

25 Do you have personal knowledge from your participation in

1 that case about what the issues were that were being
2 addressed?

3 MR. FINCH: Objection. Hearsay.

4 THE WITNESS: Yes, I am.

5 MR. FINCH: Objection; hearsay. It's not in her
6 report. There's not one word in her expert report or her
7 rebuttal report about the Zonolite attic insulation issue.
8 What she knows about that issue she's learned in her capacity
9 as an expert in the WR Grace case, so it's hearsay. You can't
10 ask her from personal knowledge because she learned about it
11 from reading documents. Number one, it's hearsay. Number
12 two, it's not in either one of her reports.

13 THE COURT: Overruled. We'll let him go ahead.

14 BY MR. SCHACHTER:

15 Q. What was your role --

16 THE COURT: Mr. Guy?

17 MR. GUY: Excuse me. Your Honor, I would join the
18 objection. And I think the best evidence of what the judge
19 ruled in that case is the judge's ruling.

20 THE COURT: Fine. We'll let her testify to that.
21 Go ahead.

22 BY MR. SCHACHTER:

23 Q. Ma'am, what was your role in that case?

24 A. I was a expert witness, and I investigated the exposures
25 associated with the ZAI attic insulation.

1 Q. And ZAI was what was referred to in that litigation as
2 Zonolite attic insulation?

3 A. That's correct.

4 Q. There is mention in the opinion about you, what is that
5 mention?

6 A. Yes, in the opinion Judge Fitzgerald writes "Grace
7 retained four experts to evaluate the risk of exposure to ZAI
8 when it's disturbed in an attic through cleaning, renovation,
9 storage or removal activities".

10 Q. And were you one of those experts?

11 A. Yes, I am.

12 Q. And you were evaluating it not when it was undisturbed,
13 but when it was disturbed?

14 A. Absolutely. That was the central issue in the case.
15 When attic insulation is disturbed, either by the residents or
16 by the contractors, what is the exposure, and does it pose an
17 unacceptable or a hazardous risk in any way.

18 And so what we did was to investigate all kinds of
19 disturbance activities that could occur. And there's a broad
20 array of those activities that I discussed in this case.

21 Q. And you prepared a report on that and submitted that
22 report in conjunction with that case; is that correct?

23 A. Yes, I did.

24 Q. Did the Court, based on your understanding, accept your
25 report and rely upon it?

1 A. Yes. And there's a quote here that endorses that "the
2 Court accepts Dr. Anderson's analysis and findings which
3 substantiate the claimants are not exposed to greater health
4 risk from ZAI than otherwise, and that ZAI poses no
5 unreasonable risk of harm, sufficient to support claims for
6 property damage. Dr. Anderson's methodology is clearly
7 articulated and is capable of repetition and peer review".

8 Q. Now that methodology that you used to disturb -- to
9 evaluate disturbed attic insulation, was that in fact as you
10 went back, actually reflected in the Court's holding that the
11 Court was dealing, not with undisturbed, but with disturbed
12 attic insulation?

13 A. Yes, the Court emphasized that. The quote here "The
14 Court will enter an Order specifying that there is no dispute
15 regarding the fact that ZAI is contaminated with asbestos and
16 can release asbestos fibers when disturbed during foreseeable
17 homeowner activities. However, the contamination and release
18 adduced from the evidence in this case, do not establish an
19 unreasonable risk of harm from ZAI home insulation".

20 Q. Thank you. I would like to turn to the second of the two
21 discrete subjects we're going to talk about on your Direct,
22 that's also something that was discussed in Grace.

23 Is there, in your scientific understanding, a distinction
24 between how regulatory agencies approach issues of potential
25 causation, and how that differs from how the courts do it?

1 MR. FINCH: Objection, Your Honor. This is clearly
2 a -- asking her for a quasi legal opinion. How courts analyze
3 causation is beyond her field of expertise.

4 MR. SCHACHTER: She has been called as an expert
5 witness in these cases.

6 THE COURT: Overruled. We'll allow her to testify
7 about her understanding.

8 BY MR. SCHACHTER:

9 Q. What is your understanding of the distinction?

10 A. Well, my understanding of this is well expressed here,
11 and I'll talk about this further. But in the Zonolite attic
12 insulation opinion, there's a very clear statement that
13 parallels my understanding.

14 "The distinction between avoidance of risk through
15 regulation and compensation for injuries after the fact is a
16 fundamental one. In the former, risk assessments may lead to
17 control of a toxic substance even though the probability of
18 harm to any individual is small, and the studies necessary to
19 assess the risk are incomplete; society as a whole is willing
20 to pay the price as a matter of policy. In the latter, a far
21 higher probability greater than 50 percent is required since
22 the law believes it unfair to require an individual to pay for
23 another's tragedy, unless it is shown that it is more likely
24 than not that he caused it."

25 MR. FINCH: Objection; hearsay; move to strike.

1 THE COURT: Overruled.

2 BY MR. SCHACHTER:

3 Q. In terms of scientific methodology, is there a difference
4 between -- can you describe to us the methodology that public
5 health agencies use? We've heard some -- let me withdraw that
6 question.

7 We've heard about a precautionary principle, what is
8 that?

9 A. A precautionary principle is one that seeks to bias
10 judgments in favor of public health protection. For example,
11 public health agencies that are charged with preempting
12 disease, protecting the public, will employ a precautionary
13 principle to carry out their mandates to regulate in areas
14 far, far below where there's any observed real incidence of
15 harm.

16 Q. Do we see that in the public health agency's
17 documentation of their process itself?

18 A. Yes, we do.

19 Q. Do you have an example?

20 A. Yes, I do.

21 Q. What is this?

22 A. This is an example in the preamble to the Occupational
23 Safety and Health Administration's document that establishes
24 worker protective levels. And here OSHA states "The agency is
25 free to use conservative assumptions in interpreting the data

1 with respect to carcinogens, risking error on the side of
2 overprotection, rather than under protection."

3 Q. And that is from the preamble for what regulations,
4 ma'am?

5 A. Establishing the worker protection level for permissible
6 exposure limits.

7 Q. Is there another example you'd like to share with us on
8 how the precautionary principle is reflected in documents from
9 these agencies?

10 A. Yes. We can see this in the next example. These are the
11 EPA's 1986 Risk Assessment Guidelines that followed the ones I
12 co-authored in 1976. I was responsible for this entire
13 process, and they were published shortly after I left the
14 agency.

15 And here what we acknowledge, and we had an expert
16 committee working with us, that the idea of using the
17 linearized multistage procedure, that is a low-dose model,
18 means that we are placing a plausible upper bound on the risk
19 and the true value of the risk is unknown and may be as low as
20 zero.

21 Q. There's a statement here, right before the yellow part,
22 "Such an estimate, however, does not necessarily give a
23 realistic prediction of risk".

24 A. That's correct. And in this zone of inference, where we
25 don't have scientific data, we infer, we use policy judgments,

1 and we speak of these risks as plausible upper bound or
2 theoretical risks. Certainly they're not regulating where
3 there are real risk or observed incidence, because we would
4 not be in a protected mode if we were doing that.

5 Q. You have one other example; is that correct?

6 A. Yes.

7 Q. And what is that, ma'am?

8 A. Well, this comes from the 1986 Asbestos Health Assessment
9 document. And even in this document which was produced under
10 my direction, and Dr. Nicholson was the contractor who helped
11 us with this document, there is acknowledgment that the dose
12 response curve that was eventually adopted by EPA and is still
13 in the EPA online database, the statement is that pure
14 chrysotile exposure -- this curve will likely overestimate
15 circumstances where there is pure chrysotile exposure.

16 Q. Now you mentioned involvement in the promulgation of how
17 risk assessment is done in the "Red Book". Does the "Red
18 Book" set out a procedure, a methodology for assessing these
19 issues?

20 A. Yes, it does. I spoke earlier of the paradigm, this
21 comes from the pages of this document. And the four steps of
22 this paradigm are widely, widely applied today.

23 Q. And is there a document, a diagram that is widely
24 accepted to reflect how these four steps are employed?

25 A. Yes, I have a diagram that I think can help us with this.

1 Q. Okay. Can you talk us through this diagram, ma'am, and
2 explain the process by which these assessments are done, and
3 to the extent that there is distinction between how that's
4 done for public health purposes as for other purposes, let us
5 know what it is.

6 A. Yes. In the first step, the hazard evaluation. What is
7 done is the strength of signal that an agent is capable or has
8 the propensity to cause disease is discussed. And I think
9 specific to -- and it also applies to establishing general
10 causation. And I think specific to what we're discussing
11 here, a public health agency while recognizing differences in
12 fiber types might choose to regulate them all the same in the
13 interest of the precautionary principle public health
14 protection.

15 While if we're speaking of general causation, we are
16 obligated to look at all the scientific evidence that might
17 inform us of the differences in propensity to cause disease
18 amongst fiber types.

19 Q. Does the precautionary principle you described to us, is
20 it employed by these public health agencies at this first
21 stage?

22 A. Yes, it is.

23 Q. All right. The second stage has dose response and
24 exposure assessment. Do you have a slide that sort of deals
25 with dose response that you can explain that for us?

1 A. Yes. And I meant to add on hazard evaluation, there is
2 something in common.

3 Q. Yes, ma'am.

4 A. Case reports are not used, either by public health agency
5 or -- in establishing causation in this first case.

6 Q. Okay.

7 A. Dose response is the next step in the process, because
8 every agent is capable of inducing an effect at a high enough
9 exposure level. So what is important here, is to understand
10 what we know about the levels of which an agency can induce
11 incidence of health harm, and then to, for public health
12 agencies, find a means to extrapolate outside of that
13 scientifically-observed zone, to regulate in a zone of
14 inference where policy judgment supercedes science because we
15 don't have the solid scientific evidence.

16 Q. Do you have a slide that demonstrates that, ma'am?

17 A. Yes, I do.

18 Q. Okay. And in this slide you have an observed range.
19 What is that -- first of all, explain the axis and what this
20 is supposed to explain.

21 A. What I'm speaking of here is the cancer risk on the
22 vertical axis, the X axis is the actual either cancer risk or
23 the actual incidents in the observed range. And on the Y axis
24 the exposure or dose, and here, relevant to asbestos, it's
25 expressed in fibers per cc year. This observed range is where

1 we have actual evidence. We have actual evidence of harm.
2 And we must extrapolate from the incidence that we know about
3 at certain exposure levels, down to what I call an unobserved
4 range by using convention.

5 Q. What is that convention, ma'am?

6 A. What public health agencies have agreed to do is to use a
7 linear non-threshold model. This is used for all carcinogens.
8 In the EPA's online database there are more than 90 of these,
9 so not just asbestos, to establish a plausible upper bound on
10 the risk, meaning that we don't have scientific information.
11 So we are, in this zone being protective of public health,
12 precautionary principle, and establishing protective health
13 guidance or regulatory levels in the interest of public health
14 protection. And we call this an inferred risk or theoretical
15 risk zone. Where the real risk might be considerably less.
16 As I said before in the '86 guidelines, these other curves
17 describe other possible dose-response curves that we could
18 infer, but in the interest of public health protection we
19 choose the upper one. Because unless we know the mode of
20 action, we have decided not to do otherwise, and that is
21 explicit in the EPA's current guidelines that were published
22 in 2005.

23 Q. We heard earlier in this case OSHA projections of cases
24 occurring at very low exposures under the current OSHA limits.
25 Is that or is that not based upon these extrapolations under

1 the no threshold model?

2 A. Yes, I mean, very frequently we will -- public health
3 agencies, OSHA, EPA, will speak of an increasing risk in the
4 zone, meaning theoretical risk, as an increase in risk with
5 every exposure because we've already set up that guideline,
6 that inferred judgment that the linear non-threshold model
7 will guide the inferred risk zone.

8 So we will often see that there is a theoretical risk
9 that's increasing if you set a standard somewhat higher or
10 somewhat lower in this zone. So that's what's meant by that.

11 Q. Thank you. Now returning to our diagram on exposure
12 assessment. Is there a scientifically viable way --
13 methodology how that's done?

14 A. Yes, yes, there is. Since the 1900s, Haber's Rule going
15 forward, the concept of using the essential information of
16 concentration frequency and duration of exposure, is the
17 accepted way to make judgments about exposure, both for public
18 health protective purposes and for establishing causation.

19 Q. Can a viable methodology for determining the danger of
20 any substance or product, not take into account exposure
21 frequency and duration, and be based solely on concentration?

22 A. No. If we have only concentration, we have only a piece
23 of information that cannot be employed in any methodology that
24 I know of, to infer either a public health protective
25 decision, or inform a public health protective decision, or to

1 inform a scientifically based decision concerning causation.

2 Q. To complete our diagram, excuse me -- I went the wrong
3 way. Last is risk characterization. Can you explain that
4 step and what it involves, ma'am?

5 A. Yes, it's very important in risk characterization to know
6 what question you're trying to answer. So the first question
7 I hear is characterizing the risk to answer the question of
8 causation; are exposures sufficient to really cause disease?
9 And then go back and assemble all of your information to
10 inform that question.

11 The second question is, how can we set public health
12 protective levels to be sure we preempt and prevent disease?
13 When we ask that question, we go back again and assemble the
14 correct information and evidence from each of the prior steps.

15 Q. Now we have heard cited in this case a number of
16 regulatory documents and agencies and statements that they may
17 have made about low-dose exposure or whether there is or isn't
18 a threshold. Do you have from personal experience,
19 involvement in many of the agencies that we're going to talk
20 about here for just a minute or two?

21 A. Yes, I have.

22 Q. And let's take for example, ATSDR. Have you attempted to
23 find what their mission statement is? Whether they're
24 employing this protective principle?

25 A. Yes, I know ATSDR very well. I was involved in -- when

1 the agency was created, I was the interface committee to
2 decide how ATSDR and EPA would operate together. And their
3 mission is clear, to promote health, safety -- healthy and
4 safe environments, and prevent harmful exposures. And after I
5 left EPA, I directed and produced their health profiles for 10
6 years.

7 Q. I'm going to ask for this for each of the agencies we're
8 going to discuss and I'm going to try to ask it once as an
9 efficiency mechanism.

10 Does this agency employ the precautionary principle in
11 its scientific evaluations of the literature, as it prepares
12 its public statements, recommendations, and if it does so, its
13 regulations?

14 A. Yes, it does.

15 Q. You obviously worked for EPA, and does it have a public
16 health purpose?

17 A. Absolutely.

18 Q. And does it employ the same methodology?

19 A. And it does.

20 Q. You're familiar with -- how are you familiar with the
21 National Toxicology Program?

22 A. I've worked directly with the National Toxicology
23 Program. I collaborated when I was in EPA with NIH as a
24 component in their bioassay studies. And I have reviewed some
25 of their reports to Congress on carcinogens. They have the

1 same mission to prevent disease due to human exposures.

2 Q. And do they use the same precautionary principle in their
3 analysis?

4 A. Yes, they do.

5 Q. The National Cancer Institute, have you worked with that
6 agency throughout the years?

7 A. Yes, I was ex-officio member on their science advisory
8 board when I was at EPA, and their mission is much the same,
9 diagnosis, prevention, related to cancer.

10 Q. And is their methodology to use the precautionary
11 principle?

12 A. Yes.

13 Q. OSHA. We've been through OSHA. Is their mission to use
14 the precautionary principle and do they do so?

15 A. Yes, they do.

16 Q. Is it -- okay --

17 A. They are to prevent -- protect worker health and prevent
18 disease.

19 Q. Do you have personal knowledge how NIOSH operates from
20 your participation with them?

21 A. Yes, NIOSH basically advises OSHA, and they have the same
22 mission and employ the same approaches.

23 Q. They don't make regulations, but do they employ the
24 precautionary principle in their scientific evaluation of the
25 literature and in their public statements and recommendations?

1 A. Yes, they do.

2 Q. ACGIH, you're familiar with that agency. Would the
3 answer be the same for that agency?

4 A. Yes, I am familiar with them, and they have the same
5 mission, to advance occupational and environmental health.

6 Q. CPSC, what is that and do you have knowledge of whether
7 they use this precautionary principle?

8 A. Yes. They are the Consumer Products Safety Commission.
9 They are charged with protecting the public from unreasonable
10 risk of injury or death, and they employ the same
11 precautionary principles. And we had another agency
12 regulatory liaison group in 1979, and we basically tried to
13 codify all of our approaches and guidelines and CPSC was a
14 member of that.

15 Q. Does their analysis follow the precautionary principle as
16 we discussed?

17 A. Yes, it does.

18 Q. ATS, what is that, and do you have knowledge of it?

19 A. The American Thoracic Society, and they are certainly
20 involved in public health protection and information to
21 improve health worldwide.

22 Q. Based upon your understanding, do they employ the
23 precautionary principle in their evaluations --

24 A. Yes, they do.

25 Q. -- public statements, et cetera? Is the answer, yes?

1 A. Yes, they do.

2 Q. I'm sorry.

3 A. Sorry.

4 Q. The American Cancer Society, is the same true for that
5 agency?

6 A. Yes, the American Cancer Society is very much involved
7 with preventing cancer and saving lives is part of their
8 mission.

9 Q. We've heard about the British Thoracic Society, have you
10 researched what they say their mission is?

11 A. Yes, and it's very similar, preservation, protection of
12 public health.

13 Q. World Health Organization, does it have a similar
14 mission?

15 A. Yes, it does. And I have served directly on their
16 committees. They are oriented very much the same way,
17 policy-based options to protect public health.

18 Q. IARC. What is IARC, and do they employ the same
19 methodology?

20 A. Yes, IARC is the International Agency for Research on
21 Cancer. It's an arm of the World Health Organization, and
22 again, is engaged in cancer prevention and control.

23 Q. Do they employ the precautionary principle in its -- it's
24 an "it", not a "they" -- scientific evaluation of the
25 literature --

1 A. Yes, they do.

2 Q. -- as it prepares its public statements and
3 recommendations?

4 A. Yes, they do.

5 Q. World Trade Organization's a little different. We heard
6 a little about that. Could you briefly explain its role, very
7 briefly?

8 A. All right. The World Trade Organization is an
9 organization to promote trade amongst countries. And when it
10 comes to trade barriers -- and I was directly involved in a
11 panel to discuss this -- what they have decided to do is if a
12 country throws up a trade barrier involving products that are
13 sanitary -- vital sanitary products, then there is a decision
14 that the risk assessment should be performed to determine
15 whether the barrier is a real barrier to prevent risk, or
16 whether it is a barrier to preserve a barrier to trade.

17 And in the underpinnings of the risk assessment work
18 that's done, the same principles from the public health
19 agencies have been employed. The actual panel that reviews
20 those risk assessments are not scientific panels.

21 Q. I believe we looked up a panel that was cited -- let's go
22 on.

23 So you've gone through these agencies. We heard about
24 some others including the Helsinki -- or a document, the
25 Helsinki criteria document. Have you reviewed that and are

1 you aware of whether it includes a public health protective
2 aspect in its analysis?

3 A. Yes, it does, among other things, a panel of 19 people
4 who were invited. But yes, yes, it does.

5 Q. And we've also heard regulations from the Mine Safety
6 Health Administration, is that what MSHA is?

7 A. Yes, that's correct, and the Mining Safety and Health
8 Administration is applying the same risk assessment principles
9 that OSHA uses.

10 Q. And in fact, do they explicitly state that they're using
11 the OSHA risk assessment?

12 A. That's correct.

13 Q. Now in that study there's been some discussion in this
14 case that they conducted a new review. Were you able from
15 reviewing the regulations that were cited, to determine what
16 kinds of populations they were reviewing?

17 A. You'll see here that all of the studies that they have
18 listed are studies of miners and millers.

19 Q. Does it appear that they were trying to make a new
20 end-user analysis from these regulations?

21 A. No, no, that's not what they were doing, absolutely not.

22 Q. I would like to conclude with just a methodological
23 issue.

24 In determining whether a product is or isn't a danger, is
25 it proper to focus only on episodic concentrations without

1 accounting for exposure frequency and duration?

2 A. No, as I said, this principle has been a principle for a
3 very long time since the 1900s. It is not, because only a
4 piece of information about some episodic exposure is only
5 that, it's a piece of information that cannot be used in any
6 methodology that I know of, or have ever found, to inform
7 either a public health agency about how to deal with very
8 low-level exposures and protect public health, or to answer
9 the very separate and different question of causation.

10 All three of these factors must be a part of this
11 assessment to come to cumulative exposure which is something
12 that we can use, and in fact becomes a very essential piece of
13 information as a part of a method to reach conclusions about
14 either public health protection or answer the separate
15 question about causation.

16 MR. SCHACHTER: Thank you, Dr. Anderson.

17 Your Honor, I would like to offer Garlock Exhibit
18 GST 15143a, which is the CV of Dr. Anderson.

19 THE COURT: All right.

20 MR. FINCH: No objection as long as that is being
21 offered for Rule 104 purposes.

22 (Debtors' Exhibit No. 15143a was received into
23 evidence and published.)

24 MR. SCHACHTER: And we offer the other material, the
25 slides and the report.

1 THE COURT: Okay.

2 (Debtors' Exhibit No. 16008 was received into
3 evidence.)

4 MR. SCHACHTER: Was I surgical, Your Honor?

5 THE COURT: Yes.

6 CROSS-EXAMINATION

7 BY MR. FINCH:

8 Q. Good afternoon, Ms. Anderson.

9 A. Good afternoon.

10 Q. My name is Nate Finch. I represent the Asbestos
11 Claimants Committee. We've met before in WR Grace case, have
12 we, ma'am?

13 A. I think we have.

14 Q. Can you speak up?

15 A. I said I think we have.

16 Q. You're currently employed by Exponent, correct?

17 A. That's right.

18 Q. And you used to be the president of a company called
19 Sciences International?

20 A. That's right.

21 Q. I want to talk to you about three things today. I want
22 to talk about bias, your qualifications, and your opinions,
23 okay? Is that a yes?

24 A. Well, yes, I mean, I don't know that I have to agree, but
25 that's fine.

1 Q. You're charging \$475 an hour for your work in this case?

2 A. I'm not charging that, Exponent is.

3 Q. Exponent is being paid by Garlock \$475 per hour for your
4 work in this case, correct, ma'am?

5 A. That's correct.

6 Q. And Garlock has paid Exponent over \$350,000 up through
7 the time of your deposition for your work in this case alone,
8 correct?

9 A. That's correct.

10 Q. And those are the breakdowns of the invoices that you
11 submitted, that's only through June, right, ma'am?

12 A. I have not, if you represent that that's correct, that's
13 fine. I don't have those invoices with me.

14 Q. Okay. Now, you did two reports in this case, correct,
15 ma'am? Your initial report, which is where you were
16 commenting on statements in the Asbestos Claimants Committee's
17 brief?

18 A. That's correct.

19 Q. And that was 29 pages long, right?

20 A. That's right.

21 Q. And then you did a rebuttal report which was in response
22 to the -- some of the statements in the report of Dr. Welch
23 and Dr. Brodtkin and Dr. Brody, correct?

24 A. That's correct.

25 Q. That was about 25 pages long, right?

1 A. That's right.

2 Q. In much of this report -- in both of your reports you are
3 just quoting things that the EPA or the EPA -- or the various
4 agencies you showed on your slides, you're just quoting what
5 their missions are. You had someone pull that out and quote
6 it, right?

7 A. I did. And I did that for a reason. I did that because
8 Dr. Welch had used as her part of her foundations for her
9 statements that she -- one part of her report mentioned ATSDR
10 said something, and that all these other agencies agreed with
11 ATSDR. And she was quoting only a part of what ATSDR had
12 said. So I thought it important to point out what these
13 agencies are and what they do.

14 Q. Okay. And so you have a total of about 50 pages of
15 reports, and you billed Garlock \$350,000. That's over \$6,000
16 per page, for every page you and the people of Exponent have
17 written in this case; isn't that right?

18 A. I don't believe that my research on this topic can be
19 broken down by a charge per page. I think that's what you
20 have done.

21 Q. You don't dispute my math, do you, ma'am?

22 A. Well, I do dispute that this has any validity, because
23 when I have travel down here, I have traveled with boxes of
24 backup references and materials that I have reviewed in this
25 case. And these legal boxes that we see everybody carry

1 around, I have a file of references that I've reviewed that
2 fill two of these boxes completely. So I don't think that
3 what I've charged should be broken down by page.

4 Q. Okay. Well, you've never appeared at a deposition or a
5 trial on behalf of a plaintiff in an asbestos case; isn't that
6 true, ma'am?

7 A. I think that is true.

8 Q. And you or Exponent have worked repeatedly for asbestos
9 defendants. You worked for WR Grace as we saw earlier this
10 morning, correct?

11 A. Yes, I have.

12 Q. You and people at Exponent have worked for General Motors
13 and Ford in connection with litigation over exposures to
14 asbestos from brakes, right?

15 A. I worked on only one brief Ford case. I never worked for
16 GM. I haven't worked for Honeywell on asbestos issues, nor
17 Union Carbide. I have worked for Garlock.

18 Q. Well, you know that people at Exponent have worked for
19 Ford and General Motors on asbestos cases, right? And in
20 fact, you testified in a trial called Granier, where General
21 Motors was the last remaining defendant, didn't you, ma'am?

22 A. I didn't understand your question.

23 Q. You testified in a Granier case where General Motors was
24 a defendant in a case that Rick Nemeroff was the
25 plaintiff's lawyer and you testified for General Motors,

1 correct?

2 A. I only testified in one case, and if General Motors was a
3 co-defendant, I have forgotten. I don't remember.

4 Q. And you know that Suresh Moolgavkar oftentimes appears as
5 -- he works for Exponent, right?

6 A. Yes, he does.

7 Q. And he has testified in cases involving Ford and Union
8 Carbide, correct?

9 A. That's right.

10 Q. And he has --

11 A. I mean -- I don't -- wait a minute. I don't know exactly
12 what cases he's testified in. I know that Dr. Moolgavkar is
13 an international expert in asbestos and I know he's testified.
14 I'm not prepared to say in which cases he's testified.

15 Q. Okay. And you would agree that you and your company have
16 been a consultant to big tobacco corporations, right, ma'am?

17 A. That's not correct.

18 Q. Well, isn't it true that you -- when you were at Sciences
19 International you wrote and received funding from something
20 called the Center for Indoor Air Research, Workplace to
21 Preform two ETS-related studies. This was in connection
22 with -- this was a letter you sent to Sciences International
23 in 1998, and it was to the Center for Indoor Air Research.
24 That's a letter you sent in 1998, right, ma'am?

25 A. Yes. If you want to bring up something that's that old.

1 What the Center for Indoor Air Research was, was a research
2 center -- and as far as I knew, the primary people who made
3 decisions for these grants, was their board. And the board
4 was made up of the leading toxicologists and medical doctors
5 at that time and included Mark Utell from Rochester
6 University, Dr. Roy Albert who had chaired the Carcinogen
7 Assessment Group, Dr. Mort Lippmann who chaired the EPA's
8 Science Advisory Board under the Clean Air Act and continues
9 to be on their boards.

10 Q. Well --

11 A. So this highly esteemed committee was the committee that
12 made decisions about giving these grants. And we had one
13 small grant once to look at indoor air issues involving
14 environmental tobacco smoke, so that's --

15 Q. ETS means?

16 A. Environmental Tobacco Smoke.

17 Q. Means secondhand smoke in common stream?

18 A. That's right.

19 Q. And the Center for Indoor Air Research was, in fact, you
20 published a paper where the funding was sponsored by the
21 Center for Indoor Air Research, right?

22 A. That's right.

23 Q. And the Center for Indoor Air Research, the members of
24 the center are divided into three classes, charter members,
25 regular members or associate members. Charter members are

1 corporations engaged in the business of manufacturing and
2 marketing cigarettes that produce at least 2 billion tax paid
3 cigarettes during 1987. Each charter member may nominate two
4 representatives to serve on the Center's board of directors.
5 There are currently six directors representing charter
6 members.

7 The document goes on saying, the Center does not have any
8 regular members. And on the associate members, it says, the
9 associate members of the Center may not serve on the Center's
10 board of directors.

11 What you were trying to do with your research on behalf
12 of the Center for Indoor Air Research, was to persuade people
13 that secondhand smoke wasn't dangerous, right?

14 A. Wrong.

15 Q. Well, you wouldn't agree that the purpose of the CIAR was
16 to generate data to resist smoking restrictions, and generate
17 conclusions that supported the tobacco industry's position
18 that ETS posed no proven health risk to nonsmokers; you would
19 disagree with that?

20 A. I have no knowledge that that was ever their purpose.
21 And if you think it's their purpose, those are your words and
22 not mine.

23 Q. Well, you're aware that the tobacco industry was sued by
24 the federal government of the United States of America for
25 fraud in a trial that lasted for over a year in front of

1 Federal District Court Judge Gladys Kessler in Washington,
2 D.C. You're aware of that, right, ma'am?

3 A. I had no involvement, and only, you know, observer
4 status. And I have some knowledge, but I did not --

5 Q. This is the opinion that Judge Kessler issued, final
6 opinion, 1,600 pages in the Federal Reporter. This is what
7 she said about the CIAR. "The TI-ETSAG", that's the Tobacco
8 Industry ETSAD -- SAG -- Environmental Tobacco Smoke, AG,
9 "existed from 1984 to 1988 when its mission was transferred to
10 the Center for Indoor Air Research or CIAR. The TI-ETSAG was
11 made up of representatives from the cigarette manufacturer
12 defendants' in-house counsel, outside law firm attorneys, and
13 public relations of experts from the tobacco institute. The
14 purpose of IT-ETSAG was to generate data to resist smoking
15 restrictions and conclusions that supported the industry's
16 public position that ETS posed no proven health risks to
17 nonsmokers."

18 That's what Judge Kessler found was the purpose of the
19 CIAR, the organization that founded your work.

20 And then, "The purpose of the TI-ETSAG was to generate
21 data to resist smoking restrictions and conclusions that
22 supported the industry's public position that ETS posed no
23 proven health risk to non-smokers".

24 Tom Osdene. You know who Tom Osdene is, right, ma'am?

25 A. No, I don't.

1 Q. He was the head scientist at Philip Morris, you never
2 heard of him?

3 A. No.

4 Q. Tom Osdene wrote in a letter to -- from him to the
5 president of the tobacco industries, April 25th, 1988. "Thank
6 you very much for your letter which I received on April 19th
7 regarding the ETS issues. As you well know, we have been
8 concerned with the scientific aspects of the ETS issue for
9 some time. I think many of us have conceptualized the ETS
10 issue as a battlefield in which the arena is dominated by
11 public relations and legal issues, while the ammunition which
12 is used happens to be science. It has been the purpose of
13 CIAR as well as its precursor, the ETS advisory committee, to
14 provide ammunition in this fight."

15 That's what the science director of Philip Morris was
16 writing about the CIAR in 1988, right, ma'am?

17 A. Well, that has no relevance to the work that I did over
18 15 years ago that I co-published with people from EPA. One of
19 my co-authors is now one of the leading scientists at EPA, and
20 that was certainly not the purpose of what we did with a small
21 grant, that was my understanding given to us by the esteemed
22 committee that I mentioned to you.

23 Q. Well --

24 A. So, I don't know -- this has no relevance to anything
25 that I know of.

1 Q. All right. You also did work for the RJ Reynolds Tobacco
2 Company, correct?

3 A. No, that's not right.

4 Q. You never were asked to enter into an agreement between
5 Science International and RJ Reynolds to work for it in the
6 fields of toxicology and risk assessment for a period of five
7 months from the date of the signing of this agreement?

8 A. Not as far as I remember.

9 Q. Okay. This is a letter addressed to you, right, ma'am,
10 March 23rd, 1999?

11 A. That's right.

12 Q. And that's J. Turim. He was the Executive Vice President
13 of your company, right, ma'am?

14 A. That's right.

15 Q. And during the agreement you agreed, "Sciences shall
16 refrain from taking any action or conduct which is inimical or
17 opposed to the interest of RJR. RJR shall be advised promptly
18 of any possible conflicts of interest."

19 That's what your company agreed in 1999, right, ma'am?

20 A. I don't remember this document at all.

21 Q. And then you published a paper, "Worker Exposure Standard
22 for Phosphine Gas", where one of the authors, Joel Seckar
23 worked for RJR, right?

24 A. This is completely different. I can tell you all about
25 this if you want me to.

1 Q. You can save that for Redirect, ma'am.

2 My question is, you published -- worked for, your company
3 received funding from RJ Reynolds, right?

4 A. No. That is completely wrong. Phosphine gas is a
5 fumigant that's used on most of our foods nationwide that are
6 grains. It also happens to be used on tobacco products as
7 well, it's used on corn and wheat, all of the food products we
8 ship are fumigated with phosphine gas.

9 This was a particular question we were working for the
10 phosphine coalition, not for RJ Reynolds. The only scientist
11 from the phosphine coalition happened to be Ph.D toxicologist
12 from RJ Reynolds who were assigned to work with us --

13 Q. Mr. Seckar, right?

14 A. That's correct. And the fact is, EPA had asked under
15 their pesticide authorities -- this had nothing to do with
16 smoking -- under their pesticide authorities, the private
17 sector is responsible for providing technical information to
18 the agency when they effect a data call-in.

19 We were asked to help the agency with a very specific
20 kind of risk assessment issue. And that is how to interpret
21 rat studies, that is when rats are inhaling phosphine gas, the
22 fumigant, so that we could establish short-term protective
23 levels for workers who were applying phosphine gas to grains
24 nationwide.

25 Q. And --

1 A. And for bystanders and residents. We did this. And we
2 published that work. Unfortunately, it was well after EPA had
3 finished their regulation. So there is -- we were not working
4 for RJ Reynolds.

5 Q. Well, do you deny that this contract between your company
6 and RJ Reynolds exists?

7 A. I said, I have no knowledge of this, but you have the
8 statement, I don't know what it means.

9 Q. You also were paid by Philip Morris to go around the
10 world and give some presentations in third-world countries
11 about secondhand smoke; isn't that right?

12 A. Not that I recall.

13 Q. Well, this is a letter to you in April 1998 from Philip
14 Morris. "Dr. Anderson, I have enclosed a bibliography to
15 address your questions about the nature of the particles and
16 compounds present in both main stream and side stream smoke."

17 And then they sent to you a conference in Bangkok,
18 Thailand, December 2nd, 1999, where the writers of the
19 conference were saying, "I'm writing to inform you that the
20 program of the Fourth Princess Chulabhom International Science
21 Congress has now been finalized. The symposium on indoor air
22 quality that Philip Morris USA will contribute to, will be
23 held on Wednesday, the 1st of December with the following
24 speakers. We would appreciate if Philip Morris could support
25 the following speakers with regard to air travel and local

1 expenses. Dr. Elizabeth Anderson, Sciences International,
2 Inc."

3 Ma'am, isn't it true that Philip Morris paid your way to
4 go to a third-world country and talk about indoor air smoke?

5 A. No, that's completely wrong on two things. One, I had no
6 idea that the Chulabhom foundation was getting some funding.
7 They had a thousand people from developing countries attend.
8 I did not know that they were getting some funding to support
9 their conference.

10 What I talked about is what is on my resume, which is the
11 work that we did under the small contract 15 years ago, which
12 had nothing to do whatsoever with anything but some analytical
13 data that compared some data for indoor air pollution with
14 other data in different settings.

15 There was no defense on smoking or anything to do with
16 smoking presented.

17 Q. Ma'am, isn't it true that the Surgeon General in 2006
18 concluded that secondhand smoke caused lung cancer in
19 nonsmokers? Do you know that?

20 A. Well, I mean, I think we concluded that was a possibility
21 when I was in EPA.

22 Q. Let's talk about Sciences International. Isn't it true
23 about seven or eight years ago Sciences International when it
24 was working for the National Institutes of Health was fired?

25 A. I have no idea. I had left the agency -- I left the

1 Sciences International.

2 Q. Well, Sciences International was your company, correct?

3 A. Sciences -- I founded Sciences International. And I left
4 Sciences International in September of 2001 or the fall of
5 2001.

6 Q. And in 2007 the federal government fired a contractor --

7 MR. SCHACHTER: Objection, Your Honor. This is
8 clearly irrelevant.

9 THE COURT: Sustained.

10 BY MR. FINCH:

11 Q. Let's turn to your qualifications, ma'am.

12 You're not a medical doctor, correct?

13 A. That's correct.

14 Q. You are not qualified to diagnose cancer, correct?

15 A. That's correct.

16 Q. You're not qualified to take a clinical history from a
17 patient for the purposes of assessing what may have caused his
18 or her disease?

19 A. That's correct.

20 Q. You are not an epidemiologist?

21 A. I'm not an epidemiologist, and I'm not a medical doctor,
22 but I regularly use their information in risk assessments. So
23 I'm certainly familiar with design of studies. I can
24 certainly read studies, and I can understand what the authors
25 are saying. But no, I do not do the statistical analysis and

1 I do not design the studies.

2 Q. Okay. So you have not designed any epidemiological study
3 of asbestos or exposed workers, correct?

4 A. No, I have not.

5 Q. And you haven't published any epidemiological study of
6 asbestos exposed workers in any peer-reviewed journal,
7 correct?

8 A. That's right. I use the information, I'm not the
9 investigator.

10 Q. You haven't done any original research on asbestos and
11 disease -- and by that I mean, either designing an
12 epidemiological study or designing a laboratory experiment
13 where you do something novel and then publish it in the
14 peer-reviewed literature, correct?

15 A. Well, I certainly was involved in a great deal of novel
16 research on asbestos starting in the late '70s. And I can
17 give you examples.

18 When we were involved in the reserve mining case, EPA --
19 I was the technical adviser on that case for the EPA. And we
20 needed to devise methods to measure asbestos fibers in water
21 for the first time. I was fully familiar with what we were
22 doing to measure asbestos fibers in air, but we didn't have
23 methodology --

24 Q. My question was, ma'am, you haven't done any research on
25 asbestos as a cause of disease in terms of either designing an

1 epidemiological study, or in doing an animal experiment to see
2 how either the inhalation or the injection of asbestos fibers
3 might lead to disease, correct?

4 A. I was in the laboratory, you cannot really design a study
5 if you can't measure the exposure. And I was trying to say
6 I've been intimately involved in understanding how to measure
7 exposure, the role of measuring the exposure, the role of
8 understanding the frequency and duration of exposure, which is
9 an essential component of any investigation, either in animal
10 studies or human studies.

11 Q. Only two of your peer-reviewed publications even have the
12 word "asbestos" in the title, correct, ma'am?

13 A. I have not looked at my resume to make that analysis.

14 Q. And one of them was a risk assessment for people doing --
15 essentially doing remediation of asbestos -- filling asbestos
16 insulation in place, and the other was a paper where people
17 were reviewing the mechanisms of asbestos disease causation,
18 other people's work, correct?

19 A. I don't remember which two papers you're talking about.
20 If you want to give them to me, I'll be glad to take a look at
21 them.

22 Q. Well, you certainly haven't published anything about the
23 epidemiology of asbestos-related disease ever in your career
24 in a peer-reviewed journal, correct?

25 A. Ask me --

1 Q. The epidemiology. You have not had any of your
2 peer-reviewed papers, none of them dealt with the epidemiology
3 of asbestos-related diseases, correct?

4 A. Well, I think certainly being responsible in EPA for all
5 of the work we did in asbestos, we were using epidemiology.
6 We were certainly reading all of the studies. But I have not,
7 as I said before, I'm not an epidemiologist. I would not
8 design those studies, so I would not be a co-author on those
9 publications.

10 Q. Certainly none of your -- none of the studies you have
11 ever designed have been cited by IARC in its latest monograph
12 on asbestos for the purposes of disease causation like
13 Dr. Welch's paper on peritoneal mesothelioma was cited by the
14 latest IARC publication, right?

15 A. There's no reason IARC should cite any particular paper.
16 They cite worlds of literature, but there's no reason they
17 should cite, because first of all, IARC is dealing in that
18 first box, the hazard identification. So they're going to
19 look at all the published epidemiology studies, all of them,
20 not just one or two. And they are going to look at all the
21 ancillary information.

22 I am not in a laboratory. I'm not an epidemiologist. I
23 would not have designed the epidemiology studies, and I'm not
24 in an animal laboratory. I don't do animal studies.

25 Q. Did you read Dr. Welch's trial testimony from this

1 matter, ma'am?

2 A. Yes, I did.

3 Q. So you would have seen when I asked her why she considers
4 the views of something like the International Agency for
5 Research on Cancer, or the United States Surgeon General, or
6 the National Toxicology Program in forming -- in helping to
7 form her views about whether chrysotile causes mesothelioma.

8 One of the reasons she said is, "they put together a
9 panel of people who know more than anybody in the world about
10 carcinogens, and then they focus on the particular ones
11 they -- of the -- ones of the carcinogens that they're
12 interested in. In this case it was asbestos, and they spent a
13 long time reviewing all the literature and synthesizing it.

14 So, it's, you know, for someone like me, I couldn't do
15 that all on my own. I don't think any one person on that
16 committee could do all that on their own. It's so much work
17 to synthesize all that information and that's why we have an
18 organization like IARC. It is their job, they're part of the
19 World Health Organization and they're not a regulatory agency.
20 Their job is to tell the rest of us what are known human
21 carcinogens, so that the rest of us can try to keep people
22 from being exposed to those things."

23 That's what Dr. Welch testified to, right, ma'am?

24 MR. SCHACHTER: Objection, Your Honor. He's not
25 cross-examining her on anything. He's just reading his

1 witness's testimony.

2 BY MR. FINCH:

3 Q. Well, let's talk about what IARC does. The International
4 Agency for Research on Cancer, it assembles the key evidence,
5 animal experiments, in vitro experiments, exposure studies,
6 and epidemiological evidence. It evaluates the reliability of
7 that, and it draws conclusions from the evidence. That's what
8 they say they do, right, ma'am?

9 A. I know exactly what they do. I've been there. What they
10 do is, they are in the first box of my paradigm. They don't
11 get involved in the exposure, but they are assembling the
12 evidence, and with their public health mission they are very
13 protective in their decision, they use precautionary
14 approaches, and it's consistent with their mission.

15 Q. Do you have IARC in front of you, ma'am, the latest
16 monograph on asbestos?

17 A. No, I don't.

18 MR. FINCH: May I approach the witness?

19 THE COURT: Yes.

20 BY MR. FINCH:

21 Q. You would agree with me that the IARC monograph on
22 asbestos that was published in 2012 is not the first time IARC
23 has examined asbestos, correct?

24 A. That's correct.

25 Q. And in the 2012 publication, they have information about

1 exposure data, they have information about the chemical and
2 physical properties of the agent, they talk about human
3 exposure, studies of occupational exposure, mesothelioma,
4 specifically, cancer and experimental animals, inhalation
5 exposure, intrapleural and intraperitoneal administration, and
6 other relevant data which includes toxicokinetics, deposition
7 clearance and translocation in humans. You would agree with
8 me that the IRAC document -- which is almost 80 pages long,
9 not including the references -- goes through all those
10 subjects, correct?

11 A. Yes, it does, and they do comprehensive documents. And
12 this is not necessarily as long as some of the other agency
13 documents, but they're comprehensive, and they do address all
14 of these topics, and they are trying to establish what weight
15 of evidence there is, or what strength of signal there is that
16 various types of asbestos can cause disease.

17 Q. And they went through, and if you look at the references,
18 there are over 400 references they cite at the back of the
19 publication. These are just the pages of the references they
20 have epidemiology studies, animal injection studies, animal
21 inhalation studies, exposure studies, all of that information
22 is included in the IARC document, correct?

23 A. Yes -- yes, it is. And they also, I should point out in
24 their comprehensive inclusion of all articles, they also
25 include articles such as by Berman and Crump. Where Berman

1 and Crump, and they quote them in this document, conclude that
2 chrysotile may have a zero potency for causing mesothelioma or
3 a 1/200th of a potency for mesothelioma, compared to other
4 fibers.

5 So yes, they're very comprehensive. They include a lot
6 of information. But at the end of the day, they are only
7 trying to draw lines of evidence from studies, principally
8 because we have so many human studies on asbestos, that
9 there's evidence that asbestos causes human disease.

10 Q. And what they say is that "pleural and peritoneal
11 mesotheliomas are reported to be associated with occupational
12 exposures to crocidolite, amosite, and chrysotile". That's
13 what IARC states, correct?

14 A. If you say that's what they said, that's fine. They also
15 say other things.

16 Q. And they say, "although the causal association between
17 mesothelioma and asbestos has been well-established, several
18 important issues remain to be resolved that are discussed
19 below". And then they talk about the importance of fiber type
20 in their document, correct?

21 A. That's right.

22 Q. And they talk about the difference between the various
23 studies in Quebec between the tremolite-contaminated mines and
24 the nontremolite-contaminated mines, right?

25 A. I know they do talk about that.

1 Q. And they talk about the Balangero -- the North Carolina
2 study, which the Judge has heard quite a bit about. And they
3 talk about the Balangero, Italy study which the Judge has
4 heard about, correct?

5 A. That's right. They are going to be very inclusive.

6 Q. All right. Now another document that is sort of a
7 comprehensive review of the evidence, was something put
8 together by the "International Program for Chemical Safety,
9 Environmental Health Criteria 203 Chrysotile Asbestos", that
10 was published in 1998. You're familiar with that document,
11 right?

12 A. Yes, I am. And as I said, I've served on IPCS Committees
13 so I'm fully aware of what they do. They are the documents
14 that the World Health Organization publishes, and they are
15 intended to give guidance internationally to protect public
16 health.

17 MR. FINCH: May I approach the witness, Your Honor?

18 THE COURT: Yes.

19 BY MR. FINCH:

20 Q. Ma'am, you recognize ACC Exhibit 3052 as the document
21 that's on the screen there, "The IPCS Chrysotile Asbestos
22 Environmental Health Criteria 203"?

23 A. I'm sorry. What do you want me --

24 Q. It's a different cover page, but the document I've handed
25 you is ACC 3052 is the monograph on chrysotile asbestos that

1 the World Health Organization sponsored in 1998, correct?

2 A. That's right.

3 Q. All right. And it lists on the first page -- I don't
4 have it on the slides, but it lists the first draft was
5 prepared by, and it lists a group of people that includes
6 William Nicholson, Professor Lippmann -- I'm looking at the
7 front page of the document itself, ma'am -- Mort Lippmann,
8 Brook Mossman, J.C. McDonald, Philip Landrigan, and
9 Dr. Nicholson again, and Professor Schreier. These are the
10 people who were involved in preparing this document, right?

11 A. I haven't found the page, but if you say that's
12 correct --

13 Q. Right on the cover, ma'am.

14 A. Oh, okay. I see.

15 Q. Correct?

16 A. That's correct.

17 Q. And Dr. Nicholson was the person who was the lead author
18 on the EPA's 1986 risk assessment for asbestos, correct?

19 A. Yes, I know him very well. I worked with him as early as
20 the late '70s. I knew him very well.

21 Q. And the World Health Organization document again, has 29
22 pages of citations, correct? The Environmental Health
23 Criteria 103?

24 A. These documents are always very, very comprehensive.

25 Q. And they cite --

1 A. -- include all the literature. If you say there are 29
2 pages, I won't count them.

3 Q. And hundreds of articles, right, for citing?

4 A. That's right.

5 Q. And what they concluded is, "adverse health effects
6 associated with occupational exposure to chrysotile are
7 fibrosis, which is asbestosis, lung cancer and mesothelioma".
8 That's on page 140.

9 A. Yes, and they also go on to say a number of other things
10 in the document. Because again, this is a public health
11 protective document. So they want to be informing the public
12 health, and so they're going to be very precautionary.

13 But they also point out in the document that "there is
14 evidence of fibrous tremolite causes mesothelioma in humans.
15 But since the commercial chrysotile may contain fibrous
16 tremolite, it has been hypothesized that the latter may
17 contribute to the induction of mesotheliomas in some
18 populations exposed primarily to chrysotile. The extent to
19 which the observed excesses of mesothelioma might be
20 attributed to the fibrous tremolite content has not been
21 resolved".

22 So they are very comprehensive. But they certainly --
23 these are not statements related to causality. They are
24 public health statements that are meant to be precautionary.

25 Q. Well, we'll get to the precautionary principle in a

1 minute.

2 But don't they conclude in the "Conclusions and
3 Recommendations Protection of Human Health", that "Exposure to
4 chrysotile asbestos poses increased risk for asbestosis, lung
5 cancer and mesothelioma in dose-dependent manner. No
6 threshold has been identified for carcinogenic risks".

7 That's at least what they said, right?

8 A. Yeah, and that's very consistent with what I have just
9 said. When you're a public health protective mission or
10 agency or entity, you're dealing in that low-dose zone of
11 inference.

12 And so we are going to see statements like this, and they
13 are correct statements. I was very much a part of
14 establishing these methods. That in the low-dose zone where
15 we don't have scientific information, we have adopted a
16 convention that there is a dose-dependent relationship. And
17 unless -- not only for chrysotile asbestos, for any asbestos,
18 for any carcinogen -- unless we understand the mode of action
19 that allows us to choose a well-defined scientifically based
20 threshold, we assume for all probable-assessment carcinogens,
21 that there is no threshold. This is totally consistent with
22 what I said.

23 Q. And so you would agree that no threshold has been
24 identified for the carcinogenic risk of chrysotile asbestos,
25 correct?

1 A. As for most carcinogens, unless we know the mode of
2 action when we're dealing in the inference zone, the
3 theoretical risks are presumed to exist as a public health
4 protective measure.

5 Q. Ma'am, have you, as part of your work in this case, you
6 have not reviewed this publication, the British Journal of
7 Cancer from last fall, estimating the asbestos-related lung
8 cancer burden from mesothelioma mortality?

9 A. I know that Dr. Garabrant has dealt amply with these
10 topics. This is not a subject of mine.

11 Q. All right. I'm not going to ask you any questions about
12 it then. But let's talk about the National Academy of
13 Sciences.

14 Dr. Rodricks who is an expert for Garlock in this case,
15 has called the National Academy of Sciences peer-review
16 process, "the most demanding peer-review process on earth".
17 You wouldn't dispute that, would you, ma'am?

18 A. The most demanding peer-review process. Well, I
19 certainly think the -- I might not state it quite that way.
20 Because the academy -- there are many demanding peer-reviewed
21 processes. So I don't know that I would say one is more so
22 than the other. But certainly the National Academy of
23 Sciences, if there is a repository wisdom on topics, the
24 National Academy's held in high esteem.

25 Q. And -- can I have the National Academy of Sciences

1 document?

2 In 1984, the National Academy of Sciences was asked to
3 evaluate nonoccupational health risks from asbestos foreign
4 fibers. You're aware of that, right, Doctor?

5 A. 1984?

6 MR. FINCH: May I approach the witness, Your Honor?

7 THE COURT: Yes.

8 MR. SCHACHTER: Your Honor, may I point out this is
9 going beyond the scope of Direct and time has gone beyond the
10 time agreed.

11 MR. FINCH: Your Honor, I started my Cross about 20
12 minutes ago.

13 THE COURT: No, a little longer than that, but --

14 MR. FINCH: I'll wrap it up.

15 THE COURT: -- move it along.

16 MR. FINCH: Excuse me, Your Honor. I'll wrap it up
17 quickly.

18 Q. Ma'am, the National Academy of Sciences at page 203 talks
19 about this "no threshold concept". And you have the document
20 in front of you?

21 A. Yes.

22 Q. And what they say is "Several kinds of information are
23 useful for estimating risks at low-exposure levels on the
24 basis of observations at higher exposures. These include the
25 shape of the dose response curve, and the range of exposure

1 studied, knowledge of the mechanism by which the type of toxic
2 effect occurs, and information on dose-related changes in the
3 uptake distribution, chemical or physical modification, and
4 excretion of a substance, i.e. pharmacokinetics". That's what
5 they write, correct?

6 A. If you say that's here, I will accept that.

7 Q. Okay. They also say, "The fundamental assumption
8 underlying the N-O-E-L, which is no observable effect level,
9 safety factor approach, is that some minimal level of a toxic
10 substance is required to cause damage and the substance is not
11 toxic below that level. The NOEL type of experiment is used
12 to find that level. The maximum dose at which no toxicity
13 would occur is called the threshold for that substance.
14 However, several mathematical models are quantitative
15 estimation of cancer risk assume that there is no threshold.
16 Risk diminishes with decreasing dose, but some risk is assumed
17 to remain as long as there is any exposure".

18 That's what National Academy of Sciences said about that,
19 right?

20 A. Yes, in taking this excerpt, the NOEL safety factor
21 approach originated in Italy in 1964, and was widely applied
22 to agents that were not suspect carcinogens.

23 That second statement -- which you have now taken down --
24 is the statement that we -- that I said we all adopted,
25 starting with EPA that I was co-author on in 1976. That

1 unless we knew the mechanism of action which I've said several
2 times, that we would presume that there is no threshold as
3 establishing a plausible upper bound on risk. This does not
4 mean that there are real risks at that level. They're not
5 talking about real risk, they're talking about theoretical
6 risk.

7 Q. Well then they go on to say, "The determination of which
8 of these two assumptions is correct, will probably depend on
9 the nature of the toxic effect".

10 A. Right.

11 Q. "Thus, understanding the mechanism of toxicity to provide
12 guidance in setting acceptable exposure levels, for a
13 substance that exerts its toxic effect by inactivating an
14 enzyme present in abundance in each cell, it is reasonable to
15 assume that a threshold would exist. On the other hand, a
16 chemical that is mutagenic or carcinogenic because it damages
17 some critical site on a DNA molecule that starts the
18 carcinogenic process, can reasonably be assumed not to have a
19 threshold. The likelihood that a critical site would be
20 damaged, would decrease the decreasing dose, but the
21 possibility that this damage could occur remains at any
22 exposure of above zero".

23 That's what the National Academy wrote in this risk
24 assessment document?

25 A. You will find what I co-authored in 1976 said the same

1 thing. And what it means is that the possibility for public
2 health protective purposes has been presumed since 1976, and
3 it has not changed. This is repeated in the EPA 2005
4 guidelines. This document you said is from 1984. This is no
5 different, and EPA's guidelines in 2005 are no different.

6 And that is, in the interest of public health protection,
7 we absolutely must look at setting protective levels of very
8 low doses for all carcinogens, not just asbestos. This is
9 what we assume, and so I think I've explained this --

10 Q. And the National Academy of Sciences went on to use
11 actual human epidemiology studies to estimate risk. And they
12 looked at chrysotile cohorts, crocidolite cohorts and amosite,
13 right?

14 A. I have not recently read this document.

15 Q. Okay. Well, they go on and they say, "For exposures as
16 low as .0004 fibers per cubic centimeter for a lifetime
17 exposure at that, all mesothelioma exposure groups, there's a
18 risk of nine cases per million, right?"

19 A. This is a very typical -- I don't know -- first of all,
20 they're speaking solely of one fiber type or another. But
21 this is exactly what we see throughout all the literature and
22 literature I co-authored, speaking to the issue of theoretical
23 risk at low dose.

24 Because we were always trying to decide how to make the
25 best decisions in the zone of inference where we have no

1 scientific evidence that there was any real risk at all. But
2 rather how much theoretical risk should we accept. And we
3 spoke in terms of these kinds of estimated individual lifetime
4 risk.

5 And in fact what EPA did, is to prevent the public from
6 misunderstanding what we meant. We have our science advisory
7 board approve a statement that went on every document saying
8 these are plausible upper bounds on risk, the real risk could
9 be less, even approaching zero.

10 Q. Isn't it true, ma'am, that the National Academy of
11 Sciences, when it estimates its mesothelioma risk, it found a
12 lifetime risk at that level of exposure of nine per million,
13 nine cases per million. Which is approximately .87 times 10
14 to the minus 5th is also approximately nine cases per million,
15 right?

16 A. They're not speaking of real risk. They're speaking of
17 the same thing I've spoken of for years. This is a
18 theoretical risk. This is isn't an incidence. This is an
19 inferred risk. It's based on inference judgments. This isn't
20 based on scientific fact. This is our best judgment as a
21 foundation for setting public health policy in a protective
22 way.

23 Q. Okay. When you were at the EPA, you were asked to --
24 your office was asked to look at the estimate of lung cancer
25 risk from passive smoking. That was a memorandum you wrote in

1 1984, right, ma'am?

2 A. If you say so. It's a long time ago.

3 Q. And this memo is in response to the request that the
4 Carcinogenic Assessment Group review the paper by Repace and
5 Lowrey on the risk of lung cancer due to passive smoking.
6 Herman Gibb of CAG has prepared a review of the Repace and
7 Lowery paper, and a copy of his review is attached. His
8 conclusion is that "two of the annual lung cancer risk
9 estimates for passive smoking generated by the author, the
10 lower risk of .87 times 10 to the minus 5th is better
11 supported".

12 Then you go on to write, ma'am, "It should be noted that
13 even at this risk would, given the size of the population
14 exposed to passive smoking, translate into a significant
15 population risk in comparison to other environmental
16 carcinogens".

17 That's what you wrote in 1984 about that level of risk
18 being a significant risk?

19 A. Well, I'm speaking of the theoretical risk zone. I'm a
20 public health official, it is my responsibility to protect
21 public health. I am not talking about causality. I'm talking
22 about theoretical risk, so that we could make some public
23 health protective decisions.

24 Q. Now you showed on Direct exam, the statement from Mine
25 Safety and Health Administration. Do you recall talking about

1 that?

2 A. I'm sorry?

3 Q. You were asked on your Direct exam about --

4 A. Yes.

5 Q. -- the questions in various federal registers, and one of
6 them was the -- Cam, click it up forward -- you were asked
7 about that, and isn't it true that what those regulations
8 actually say, "Although OSHA stated in the preamble to its
9 1994 final rule that there is a remaining significant risk of
10 material impairment of health or functional capacity at the
11 0.1 fiber per cc limit, OSHA concluded that this concentration
12 is 'the practical lower limit of feasibility for measuring
13 asbestos levels reliably'. The MSHA agrees with this
14 conclusion", right? That's what they wrote in the
15 regulations, correct?

16 A. That's what they wrote. And what they meant is, there's
17 always debate in this zone of inference, because we don't have
18 scientific fact. We are using judgments about sliding up and
19 down this upper bound risk line of where to draw a line in the
20 sand that's necessary under OSHA's enabling legislation. But
21 they are supposed to protect worker health. So they cannot
22 knowingly set a permissible exposure limit that does not
23 protect public health. It's -- they would be sued if -- they
24 can't do that.

25 Q. Ma'am, you talked on your Direct Examination about the WR

1 Grace case and the Zonolite attic insulation case in
2 particular. Do you recall that?

3 A. Yes.

4 Q. And the Zonolite attic insulation case was a case
5 involving whether people had a claim for property damage,
6 right? That's what the quote you read out of Judge
7 Fitzgerald's opinion was about, right?

8 A. I was involved in both matters, the bankruptcy matter and
9 the matter involving attic insulation.

10 Q. And what you talked about today, was the matter involving
11 attic insulation. That was a case about whether people who
12 had Zonolite attic insulation in their homes, which had been
13 through the popcorn processing, had a right to have WR Grace
14 pay for remediation of their homes. That's what those
15 lawsuits were about. They weren't about mesothelioma people
16 suing WR Grace, right?

17 A. As far as I was concerned, my assignment was to look at
18 the risk. I don't know what the legal -- I don't know what
19 the legal questions were. But as far as I was concerned, I
20 was very much in the role of establishing the public health
21 risk associated with asbestos being in peoples' attics, and I
22 wanted to know what that risk was. Now if its ultimate use
23 was to determine property damage or whatever, I was not
24 focused on that.

25 Q. And are you aware, ma'am, that the same judge who issued

1 that opinion about attic insulation in the context of property
2 damage, also did an estimate of Bondex's asbestos liability
3 relating to chrysotile asbestos from joint compound? Are you
4 aware of that?

5 A. I have heard about that opinion. I know very little
6 about it.

7 Q. And she -- and isn't it true that in that opinion, she
8 said that chrysotile asbestos from joint compound can cause
9 mesothelioma. And she estimated Bondex's asbestos liability
10 at over \$1 billion, which was 10 times higher than what
11 Bondex's experts, which is the Bates White firm, was coming in
12 at, right?

13 A. I was not involved in that proceeding. I know that Judge
14 Fitzgerald, when she wrote the decision regarding attic
15 insulation, and when I testified in front of her, thoroughly
16 understood the scientific issues that I was talking about. I
17 could tell that. What I don't know is how well she was
18 informed in the Bondex case. I was not there.

19 Q. And you wouldn't expect her not to thoroughly understand
20 the scientific issues if she was presented with them in that
21 case, would you, ma'am?

22 A. I don't know what she was presented with.

23 MR. FINCH: Your Honor, that's all the Cross I have.

24 THE COURT: Okay. Anything else, Mr. Schachter?

25 MR. SCHACHTER: No, Your Honor.

1 THE COURT: Thank you, Dr. Anderson.

2 MR. FINCH: Your Honor, at this time for purposes of
3 Rule 104, we would offer ACC 3341, 3052, and 4323, which is
4 the IARC document, the World Health Organization document, the
5 National Academy of Sciences document. We would also offer
6 ACC 3214, which is the British Journal of Cancer 2012 paper,
7 and ACC 5063c, which is the editorial from the British Journal
8 of Cancer, all for Rule 104 purposes.

9 MR. SCHACHTER: No objection.

10 THE COURT: We'll admit those.

11 (ACC Exhibits No. 3052, 3214, 3341, 4323 and 5063c
12 were received into evidence.)

13 THE COURT: Okay. You can step down, Dr. Anderson.
14 And why don't we go to lunch and come back at 2:00.
15 (Lunch recess.)

16 THE COURT: Mr. Harris.

17 MR. HARRIS: Yes, Your Honor. We call Dr. Lambertus
18 Hesselink.

19 LAMBERTUS HESSELINK,

20 Being first duly sworn, was examined and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. HARRIS:

23 Q. Please tell us your name.

24 A. Lambertus Hesselink.

25 Q. Where are you from?

1 A. The Netherlands.

2 Q. Where are you from now? Where do you live now?

3 A. I live in California. I work at Stanford University.

4 Q. What do you do for work?

5 A. I do research, and I teach, and a few other things.

6 Q. Dr. Hesselink, last week we heard from Dr. Peterson and
7 he displayed this slide, and he identified Dr. Longo as an
8 event -- as -- or his emergence as an expert witness as an
9 event that affected the plaintiff's case against Garlock and
10 how it may have supposedly improved. Have you looked at some
11 of Dr. Longo's work?

12 A. Yes, I did.

13 Q. And specifically have you looked at his Tyndall lighting
14 demonstrations?

15 A. Yes, I did.

16 Q. He showed a Tyndall lighting demonstration to the Court
17 when he testified a couple weeks ago regarding Gasket Study
18 IV. Is that one of the studies you've looked at?

19 A. That's correct.

20 Q. You've reviewed his testimony about what he said about
21 Tyndall lighting currently, and in the past?

22 A. I have.

23 Q. I want to ask you about Dr. Longo's opinions, but before
24 I do, I would like to ask you about what qualifies you to
25 address these topics.

1 Can you please tell us about your educational background?

2 A. I was educated in The Netherlands. I actually have
3 two degrees in applied physics and in applied mechanics. I
4 figured that physicists couldn't build anything and mechanical
5 engineers didn't know about enough physics, so I took both
6 classes and graduated. Then I went to Cal Tech as a Fulbright
7 Scholar, and got a degree there in Master of Science, and I
8 got a Ph.D from Cal Tech as well and I got an engineer's
9 degree from Twente University, I did two degrees at the same
10 time when I was at Cal Tech.

11 Q. Where did you go to work after you received your Ph.D?

12 A. After I received a Ph.D I was an instructor in applied
13 physics at the Cal Tech for two years, and a post-doc for one
14 year. Then I made assistant professor at Stanford University
15 in 1980.

16 Q. All right. Did you ultimately become a professor at
17 Stanford?

18 A. I did, yes.

19 Q. In what fields are you a professor? What departments do
20 you teach?

21 A. My primary department is electrical engineering and
22 applied physics, and I also have appointments in the
23 aeronautics and astronautics department.

24 Q. What type of courses do you teach?

25 A. My primary field is in physics, applied physics, optics,

1 laser, matter interaction, optical data storage, optical
2 scattering, large interaction between electromagnetic base and
3 matter.

4 Q. What type of research have you done over the years,
5 generally?

6 A. I have been involved in a number of different research
7 topics, started off in looking at flow visualization. And
8 these are gas or liquid flows that are built as particles, and
9 looked at the scattered light that is coming off of the
10 particles, used that for visualization and analysis purposes.

11 I've also been involved over the last 15 years or so
12 developing both theory and practical applications of the
13 interaction of nanoparticles and nanomechanical and optical
14 structures.

15 I teach courses in the areas of lens design. I teach
16 courses in the area of electromagnetic waves and how you
17 actually can find solutions to them, the interaction of light
18 as electrical devices and particles and objects. I have
19 taught courses in nanophotonics. I've taught courses in the
20 analysis of optical systems using Fourier analysis. I teach
21 and have taught courses in mathematics that are related to
22 these subject matter.

23 Q. Have you published your research in the peer-reviewed
24 literature?

25 A. I have published over 400 papers in peer-reviewed

1 journals.

2 Q. Has your work been recognized generally in the scientific
3 community?

4 A. I would assume so. I was made a member of the Royal
5 Dutch Academy of Arts and Sciences. And I've held other
6 distinctions in terms of professional awards for work that I
7 have done. I am a fellow of the Optical Society of America,
8 the Institute of Instrumentation Electrical Engineers, and I
9 was a Fulbright scholar and a number of others.

10 Q. One of the pictures we displayed before, it references
11 the Hubble Space Telescope Committee. Can you tell us what
12 that involved?

13 A. Well, in -- I think it was 1990, on the 3rd of July, I
14 got a phone call from NASA and said Houston, there's a
15 problem. And so they asked if I could come to Washington on
16 the 5th of July. And it was a ad hoc committee that was
17 formed. In fact, there were two or three committees, and I
18 was on one of the ad hoc committees to try to fix the Hubble
19 Space telescope. And ultimately the recommendations that we
20 made were followed up by JPL and fixed the telescope.

21 Q. Dr. Hesselink, Dr. Longo's -- well, Tyndall lighting
22 generally, that involves light scattering?

23 A. Yes. It's the interaction of electromagnetic waves with
24 particles and so that would be called light scattering.

25 Q. Have you published papers and conducted research with

1 respect to light scattering?

2 A. Yeah, I have a number of papers in that area, yeah. I've
3 also written a number of book chapters on this subject.

4 Q. Have you taught courses that relate to light scattering
5 at Stanford?

6 A. Yeah, I think amongst the ones I just enumerated, there
7 are probably six or seven courses that I teach related to that
8 subject matter.

9 MR. HARRIS: Okay. At this time, Your Honor, we
10 would offer Dr. Hesselink's CV, it's marked as Exhibit GST
11 15160a.

12 MR. FROST: No objection, Your Honor.

13 THE COURT: We'll admit that.

14 (Debtors' Exhibit No. 15160a was received into
15 evidence.)

16 MR. HARRIS: At this time we tender Dr. Hesselink as
17 an expert witness in mechanical engineering, applied physics,
18 light scattering and Tyndall lighting.

19 MR. FROST: No objection.

20 THE COURT: We will admit him as such.

21 BY MR. HARRIS:

22 Q. Dr. Hesselink, I would like to turn to the work that
23 you've done in this case. This is a still photograph from
24 Dr. Longo's Gasket Study IV. Do you recognize this?

25 A. Yes, I do.

1 Q. And is this what we see under the Tyndall lights in
2 Dr. Longo's experiments?

3 A. Well, I was asked, Your Honor, to determine whether it
4 was possible that the bright spots that you see on the
5 picture, if these could be caused by scattering from asbestos
6 fibers in the range from 0.01 microns to 3 microns in the
7 diameter.

8 Q. The question that you put -- well, let me first ask
9 you -- you've put together some slides that we're going to go
10 over, is that correct, to help illustrate the work that you've
11 done?

12 A. That's correct.

13 Q. The question you posed here is, Dr. Longo states that the
14 Tyndall lighting technique he has used, allows him to see
15 respirable asbestos fibers in the range of 0.01 to 3 microns
16 in diameter.

17 And the question is, is that possible; is that right?

18 A. That was the question that I was asked, that's correct.

19 Q. We've provided transcripts to you of Dr. Longo's
20 testimony through the years with respect to what he said about
21 Tyndall lighting and what we can see; is that correct?

22 A. That's correct.

23 Q. You identified some of that testimony for us; is that
24 correct?

25 A. Yes. Your Honor, I was interested in trying to find out

1 exactly what Dr. Longo was referring to so that we -- or at
2 least I could pose a clear question and answer it.

3 And so I went through the deposition transcripts that
4 related to the matter, and I put a few of these slides
5 together here that I think are relevant and help frame what
6 the question is.

7 Q. So this slide here speaks of -- this is Dr. Longo
8 narrating a Tyndall video. Now we're going to see the
9 electric wire brush, too, again. And what you're seeing here
10 with the Tyndall lighting is the microscopic particles and
11 fibers that are coming off the gasket in referencing
12 respirable size particles; is that right?

13 A. Yes. So that was one of the references that relate
14 essentially to what the observation might be according to
15 Dr. Longo.

16 Q. In this testimony that you identified he's saying that --
17 is it your understanding he's saying that he thinks we're
18 seeing single fibers, single bundles, single matrices, not
19 clusters; is that right?

20 A. Yeah. I think the language there is that, do you think
21 that multiple fibers or multiple bundles were scattering the
22 light that created those bright spots on the film. Those,
23 Your Honor, are the bright spots that are visible on the
24 previous picture.

25 And the answer is yes, I think those are single fibers

1 that -- single fibers, single bundles, single matrices.

2 Q. Why is that significant to you?

3 A. The question is really what we see on the image. Could
4 that be caused by respirable fibers in the range that
5 Dr. Longo indicated from 10 nanometers to .01-micron to
6 3 microns. So that's the question that I would like to
7 investigate from a scientific perspective.

8 Q. All right. He references here that with respect to
9 Gasket Study IV, everything that he sees -- or it would be his
10 opinion that almost 100 percent is respirable?

11 A. That's what he says, yes.

12 Q. Then you've identified a couple of slides where he's
13 identified the size range of the particles; is that right?

14 A. Yeah. He says that we can see -- and this is referring
15 to the Tyndall lighting technique, Your Honor, down to .01
16 or .02 microns in diameter, and the calculation has been done
17 so that refers to 10 or 20 nanometers in diameter.

18 Q. Can you explain what that size range means to you as a
19 scientist or to us as lay people? How small is that that
20 we're talking about?

21 A. I was going to try to make a comparison to a human hair
22 which is -- I don't have that much hair, so it's not mine.
23 But that's typically on the order of microns, maybe 5 or
24 10 microns or so. And so the 10 nanometers is a very, very
25 small size. It's about equal to maybe 100 molecular sizes.

1 Q. Here he talks about in the size range of .02
2 to .03 microns in diameter.

3 A. Well, it's a little bit more specific. I thought that he
4 says that the Sony camera is able to look at a population of
5 chrysotile fibers that have a diameter of .02 to .03 microns
6 and cause enough light scatter to be recorded by the Sony
7 camera and that's my opinion.

8 Q. Why is that significant to you?

9 A. Well, this Sony camera is part of this Tyndall lighting
10 setup, Your Honor. So he was referring to what his optical
11 setup was capable of seeing. And he offered that as an
12 explanation of what these bright spots in the image are.

13 Q. So -- and then the last slide we have on his testimony
14 talks about the maximum diameter being 3 microns of the fiber.
15 Why is that significant?

16 A. Well, because in the earlier reference we refer to a
17 respirable-size fiber, and so it was important that we both
18 know what that range is. And so the range that he established
19 there is less than 3 microns, which is consistent with what
20 I've seen in the literature.

21 Q. So is that the aerodynamic diameter or is that just the
22 actual diameter of the fiber itself?

23 A. That's the physical diameter.

24 Q. What's the difference between aerodynamic diameter and
25 the actual physical diameter of the fiber?

1 A. Your Honor, if you have a general fiber, it looks maybe
2 has an aspect ratio of 10 to 1. Meaning that the length may
3 be 10 times longer than the diameter. And it also will have a
4 shape that is not necessarily just a single cylinder. There
5 is a concept which essentially says that the aerodynamic
6 behavior of that structure can be understood by looking at a
7 sphere of a diameter that would have equivalent behavior to
8 that particle in air.

9 And so the aerodynamic diameter, typically, is a little
10 bit larger than this general diameter of the fiber would be.
11 But from a perspective of how it would behave in an
12 aerodynamic environment, the sphere and fiber would have
13 similar properties.

14 Q. So that brings us back to the original question that you
15 sought to answer.

16 Your Honor, there will be a few slides. It might be
17 helpful if Dr. Hesselink could step down from the stand.

18 THE COURT: Okay.

19 BY MR. HARRIS:

20 Q. Dr. Hesselink, would you like to step down, please?

21 A. Yeah. Is it possible to get a microphone because I'm not
22 sure if my --

23 Q. Yeah, she has one.

24 Come back around this way. Maybe it will actually be
25 better if you stood over on this side.

1 A. Okay.

2 Q. You can see the judge.

3 So can you tell us how did you go about answering this
4 question?

5 A. Well, the first thing that I wanted to do was -- can you
6 go back to the previous slide?

7 Q. Sure.

8 A. So the question is what I was looking at in that rating
9 up there. And so what you see is, Your Honor, a number of
10 bright spots. And then there's certain areas where this is
11 part of the clothing, and then up in the left-hand corner you
12 see a light lot of very bright light sections.

13 So the question that I tried to investigate was as I look
14 at these bright spots, can they be caused by these particles
15 that are respirable asbestos in this particular range. And
16 that's the range that Dr. Longo said that we would be able to
17 see. Now the important part of this is that the size is a
18 very significant parameter in the overall light scattering
19 process. And so I can probably explain that best by looking
20 at the next slide.

21 The basic idea is that there is a light source here. You
22 can think about this as maybe a flashlight light source. Then
23 there is a parabolic mirror, that typically takes light from
24 an element. This is on the upper left-hand side, makes that
25 into a collimated beam, which is a parallel beam of light,

1 sort of like a search light.

2 Then there is not really visible, but at least in a
3 cartoon format, there's an indication there that we have a
4 sample. So these would be the fibers that would scatter light
5 from that light source. And the geometrical setup -- is it
6 possible to get some water --

7 MR. HARRIS: Do you need some water?

8 THE WITNESS: Yeah.

9 MR. HARRIS: Sorry about that. I should have had
10 one for you.

11 THE WITNESS: Sorry.

12 So the light that is coming from the source,
13 scattered by the particles that are visible in that region.
14 And in a Tyndall lighting setup, what you do is, you take a
15 camera that essentially is up axis of the main direction in
16 which the light is propagating, so that you look at the
17 scattered light of an angle of about maybe 5 or 10 degrees.

18 In the literature that is referred to as forward
19 scattered light. Because the light is coming in, in this
20 direction, and it is scattered in the forward direction,
21 that's what we measure.

22 In practice I will show you shortly the light
23 actually scatters over 360 degrees, not only forward, but also
24 backwards.

25 So in this particular case here, the Tyndall

1 lighting technique that has been used for scientific
2 applications for many, many years, is kind of basically
3 depicted here. What I set out to do was to try to determine
4 what are the critical parameters in this problem.

5 The first thing that is important is that the light
6 in this particular case is shown as yellow. The light that is
7 being used is white light, and so essentially has a spectrum
8 of the visible range from about blue to red. And so somewhere
9 in the order of about .4 to .6 microns. And that's the
10 wavelengths of the light that's being used.

11 That wavelength's .5 microns, let's say the middle
12 of the spectrum, sets the length scale of the problem. What I
13 mean by that is that the particles will behave in a very
14 different way if they are much smaller than the wavelengths of
15 light, or if they are similar in size or larger than the
16 wavelengths of light.

17 So of the range that we have established now that
18 Dr. Longo says is visible here from .01 to 3 microns, the .01
19 is much less than .5, so that's actually in the regime where
20 the size of the particle is smaller than the wavelengths of
21 light.

22 Then on the other end of the spectrum, the 3 micron,
23 the particle is larger than the half micron typical wavelength
24 of light. So that ratio actually determines the two regimes
25 in which the scattering works. One of them is called Rayleigh

1 scattering, and that is the case in which the light is
2 actually longer than the diameter of the particle. So the
3 light has a certain wavelength. That wavelength is this long,
4 the particle is very small.

5 In that regime the amount of light that gets
6 reflected or scattered from the particle essentially decreases
7 as the ratio of how small the particle is compared to the
8 wavelength of light to the 6th power. So if I have a particle
9 that is 1/10 the wavelength of light, which is roughly here,
10 then the amount of light that gets scattered is 1 million
11 times smaller than if I had a particle that is the same size
12 as the wavelength of light.

13 So over the range of particles that Dr. Longo says
14 he can see, the amount of light that gets scattered is roughly
15 a million times smaller on the small end than it is on the
16 large end. So the basic message there is that it is not just
17 a uniform and simple linear relationship, but the small
18 particles scatter a very, very small amount of light.

19 The second thing that is important to this is that
20 this camera is essentially looking at the object -- and if you
21 can go back to the previous slide. What you see here is that
22 the camera is actually looking at the light that is coming in
23 this direction and then comes off at an angle and records that
24 on the video recorder.

25 So it is important to note that this object here is

1 the work study that Dr. Longo carries out, and you can see the
2 light scale is about the size of a person there, and that got
3 actually imaged onto a small detector that's about the size of
4 a centimeter. So if you go to the next slide.

5 In this particular configuration, this camera is
6 looking at the particles and decreasing its magnification. So
7 what this is doing is essentially, the human eye cannot see a
8 10 nanometer or .01 micron particle. With this optical setup
9 there is another reduction that essentially makes that even
10 more difficult to see.

11 In fact it would be the equivalent, if you wanted to
12 see with this setup the particles that have the size of 10
13 nanometers or .01 micron, it's like looking at a baseball in
14 Chicago, but I'm in San Francisco. So optically I cannot see
15 that. So what you're seeing on these pictures, the bright
16 white spots, cannot be images of these small particles.
17 Because in order to see those, I should have used a
18 microscope, and in fact that is what Dr. Longo is using. He
19 used a scanning electron microscope to determine what the size
20 of the particle is.

21 So the few things that is important is, the first
22 one is that we can't image them because there's not enough
23 resolution. In fact, it's the wrong instrument to image these
24 small particles, you should have used the microscope.

25 The second question is, is there enough light that

1 even if you couldn't image them, you would have a blur or a
2 blob of light that would be as a result of light scatter from
3 these small particles in the image.

4 So in order to answer that second question, I did
5 the following. The next slide.

6 So in this particular slide, Your Honor, it's now a
7 slightly different setup. And what we have in here is a laser
8 instead of a white light source. Then there are a number of
9 lenses. There's an aperture in here which produces a beam of
10 light that goes through some optical elements and that are not
11 important right now. And then there's a small sample here.

12 The scientific approach to figuring out whether or
13 not you can see a single particle is to take measurements of a
14 single particle. And so instead of having the whole cloud,
15 you determine, is it possible that a fiber of a certain size
16 connects the -- produces enough scattered light so that we can
17 measure that.

18 And so we then used the same configuration as I
19 showed you before, but the sample is now here, and I have a
20 camera which is a detector. This is not a video camera.
21 These detectors are orders of magnitude more sensitive than a
22 video camera. I take this detector and I essentially move it
23 around this optical axis. So if the light is coming toward
24 here, Your Honor, and the detector is there, I essentially
25 move the detector like that, and I measure the scattered light

1 in each one of those locations.

2 Why do I use laser? Well, one, it has a single
3 wavelength so I said earlier, does have the length scale of
4 the problem of the interaction.

5 Second, light actually vibrates either in a
6 horizontal or vertical direction, that's called the
7 polarization.

8 Thirdly, we can focus it very tightly into a very
9 small spot here.

10 And thirdly (sic), we can essentially then do
11 measurements for which we essentially look at the scattering
12 from that particle.

13 BY MR. HARRIS:

14 Q. In the sample, what is the sampling used?

15 A. So the sampling here is a single asbestos fiber that is
16 mounted onto a ring. So if this is a ring of metal, I used
17 a -- at least I did and somebody did prepare a sample for
18 me -- that put a fiber on the ring on both sides so that there
19 is a hole in here and I can then illuminate with my laser beam
20 and I can measure the scatter light that comes from that
21 single particle.

22 Q. And that detector, as you said, is more sensitive than
23 what you would ever see in an off-the-shelf video --

24 A. By orders of magnitude, yeah. And we need that because
25 we need to determine, quantitatively, how light is scatted

1 from that particle.

2 Q. All right.

3 A. The other example is that this is not enough because in
4 the experiments that Dr. Longo conducted, he actually used the
5 white light source. And as I just explained, there is a whole
6 range of wavelengths there, so we need to really determine
7 what the effect of having a range of wavelength is as well.

8 So we then did the same experiment. We have a light
9 source here. We have a -- in this case a small aperture. The
10 purpose of that aperture is that it will allow us this optical
11 element in here, to take this aperture and image it onto the
12 fiber. And so the fiber was 25 microns long. And so of the
13 25 microns, I only illuminated a small section of them and I
14 made very careful measurements to make sure that there was no
15 scattered light from any of the mounting structures there,
16 because that could contaminate the results.

17 And then what we did is, we essentially had a detector as
18 well as a camera. And so there is a flipping mirror. If the
19 mirror is actually out of the way, I can make the quantitative
20 measurements. If it's in the way, I can see the setup,
21 whether or not I can actually see a spot on that camera that
22 would determine whether or not you could see the light scatter
23 from these particles.

24 Q. Okay.

25 A. Then we went through that result, there was something

1 called a scattering cross section. Essentially what it means
2 is that if there is a certain intensity of light that comes
3 into this particle and this fiber element, how much of that
4 gets scattered out, and that is what this is. So that is 6
5 times 10 to the minus five or it is .9 micron diameter.

6 As I said earlier, these are the larger fibers because if
7 you cannot see the larger fiber, the smaller fibers cannot be
8 seen by a million times. And so the question was, what do we
9 do in this case with the experiments?

10 We did this, and we looked at single fibers and we looked
11 at a bundle of fibers. And so these are the results, and so
12 we get these experiments and came to the conclusion then we
13 did most of the imaging and the quantitative results that we
14 could not see any image at all, let alone the very, very
15 bright spots. And then go back to the first picture. One
16 more. Yeah.

17 Your Honor, these bright spots in here are white. The
18 reason they're white is in the camera there is actually a
19 dynamic range. There's a certain threshold below which you
20 will not get any image. But then there's an upper limit as
21 well. And if there is a lot of scattering in the upper limit
22 and that will be the maximum intensity that you will see in
23 your image. Those are all saturated spots. So they are in
24 the top of the dynamic range. What we measured was, is that
25 below the threshold, there was not enough light to even expose

1 the film.

2 So when we went back to the results, these experiments
3 were done with great care, but it's very difficult to, for
4 example, look at the effect of certain things. This, as I
5 explained before, the fiber was mounted on the small ring, and
6 so the ends of it are not accessible.

7 So if I -- and it was suggested that -- maybe by
8 Dr. Longo at some point -- that maybe it's the end of the
9 fiber that is causing these bright spots, it's not just the
10 fiber itself.

11 So in order to answer that question, I went in and I did
12 a numerical analysis. So this problem here is a problem by
13 which electromagnetic waves have essentially satisfied
14 something called Maxwell's equations. You need to find a
15 solution to Maxwell's equations for the scattering problem.
16 That has not been done before. But we built at Stanford a
17 technology which is called a -- terrible word -- Finite
18 Difference Time Domain Analysis. And so FDT analysis of
19 Maxwell's equations, essentially is an exact solution of this
20 problem.

21 Q. This is a mathematical model that you're describing?

22 A. This is a numerical model of Maxwell's equations. And
23 Maxwell's equations are well known and have been tested for
24 several hundred years as to the accuracy of what they
25 represent.

1 So the question was only how do you do that on a
2 computer. And so what we did was, we took the fiber of
3 various diameters, and light was coming in with different
4 polarization. As I said earlier, the light can be propagating
5 or actually fluctuating in this direction is propagating or in
6 that direction.

7 As you can imagine, if the fiber is like this, if the
8 light comes in, goes up and down like that, you would have
9 maybe less or more scatter than if it is actually vibrating
10 like this. And so those are referred to as polarization TE
11 and TM.

12 And then we came in at different angles in the numerical
13 experiments, and we can calculate the light that gets
14 scattered 360 degrees. And we can also do that by just
15 looking at the ends or at any intermediate angle.

16 So that tool gave us the ability to create inside, as to
17 what the physical mechanism is.

18 Then what I did is, I took several of the same
19 configurations as we tested in our experiment, and compared to
20 numerical results, as the experimental results in terms of the
21 scattering cross sections.

22 So what you see, Your Honor, is -- no, the previous one.

23 Q. Go back?

24 A. Yeah. So one thing that you see here, Your Honor, is a
25 typical plot, a scatter plot. Although it's not very visible

1 on this projector, there are actually circles here are
2 concentric about the particle. So this is the particle that
3 is here. Light is coming in and in this direction -- in this
4 direction, sorry.

5 And then what you see here is that the distance away from
6 the center indicates the amount of light that is being
7 scattered in that particular direction. And then going around
8 the circle you've got the 360-degree intensity.

9 So if particle is here, my beam comes in like that. And
10 I can go around it, I can measure the scattered light.

11 What you see is that this is in a forward direction that
12 most of the light here has a very high amplitude and a
13 backward direction there is not much. If you take this very
14 small area where they are upgrading, you see several what are
15 called these lobes, and so most of the light goes in the
16 forward or in the directions of a few degrees. That's why you
17 come out in about 5 or 10 degrees to try to get as much
18 scattered light as you can.

19 However, because of the fact that these particles when
20 they become larger, scatter primarily forward, this technique
21 filters out most of the small particles and makes them
22 invisible, even if there was not -- if there was enough light.
23 And the reason for that is that as I said earlier, with the
24 1-micron type particles, most of the light is in the forward
25 direction.

1 But the very small particles, if you look in the sky, the
2 sky in all directions is blue. Forward and backward light is
3 identically the same. So for the .01-micron particles, there
4 should have been a lot of light going in the opposite
5 direction.

6 So when you look at all of this and you make a
7 comparison -- the next slide. What I did was, I looked at
8 some of these measurements, and I compared them against the
9 numerical results, and we showed that they were very closely
10 the same. Once we established that that was the case, we
11 could then use the numerical tool to determine whether or not
12 it would be a lot of scatter coming from the edges, and what
13 angle I would get the most scatter, what the effect of size,
14 shape, polarization, all of those things that are more
15 difficult to do in the experiment, I can do them in the
16 numerical calculation, and we did.

17 The net result of that was that under all circumstances
18 using the setup that Dr. Longo had, it is not possible to see
19 any of the respirable fibers in the range from .01 micron to 3
20 microns.

21 Q. So the answer to that question would be, no?

22 A. So the answer is, the technique that he used, those
23 bright spots are not particles in the breathable respirable
24 range from 0.01 micron to 3 microns.

25 Q. So the next question is, what about they're at a high

1 enough concentration? Is it possible that the bright spots
2 represent clusters of particles in the size range described
3 above? And specifically, going to Gasket Study IV, in these
4 concentrations that he's reporting, from 4 fibers per cc, up
5 to 24 fibers per cc. And then in later studies he gets 36
6 fibers per cc, maybe even as high as 70 fibers per cc.

7 If they're in a cluster like that, in that concentration,
8 is that a sufficient concentration so that you would be able
9 to see them under the Tyndall light?

10 A. Your Honor, the basic idea that was proposed was that if
11 you look at the sky, the particles are incredibly small, you
12 know, they're essentially .0001 micron, but you still can see
13 the blue sky. And so obviously even these small particles
14 scatter enough light. And so could that be a possible
15 mechanism that we see here, that there would be a cluster of
16 these particles and that would cause that?

17 When we do the calculations and the experiments, in fact
18 we did experiments of several fibers in a cluster, it turns
19 out that the amount of light that gets scattered from the
20 bundle of fibers is actually lower than it is from the single
21 fiber.

22 And the reason for that is that some of the light that
23 gets -- some of the light that gets reflected or scattered
24 from the first one, gets scattered again for the second one,
25 they're very close. And so the net result is, that it's

1 actually a slightly lower one.

2 However, when you do an estimate, it turns out that if
3 you had a very large number of fibers out of something like
4 three orders of magnitude more than what Dr. Longo measures,
5 and I have no opinion about whether or not these numbers are
6 correct, but assuming that they are, these are off by several
7 orders of magnitude to be able to provide, even for the
8 largest fibers. For the very smallest fibers they're off by
9 something like five or six orders of magnitude. And so it's
10 not clusters that are represented in that image.

11 Q. Dr. Longo did -- so the answer to that second question
12 is, no, the second question?

13 A. Correct.

14 Q. But Dr. Longo did testify to this in this trial. He said
15 if you're using a product that has 10 percent asbestos in it,
16 it's my opinion that the dust that's seen in Tyndall lighting
17 would be approximately 10 percent.

18 If you're pouring raw asbestos, then what you're seeing
19 in the Tyndall lighting is all -- is 90, 99 percent of the
20 asbestos and some other minerals may be there.

21 Based on the research that you have done, does your
22 research support that conclusion, that the percentage of the
23 dust that's in the product, matches the percentage of the dust
24 that you see in the Tyndall lighting?

25 A. Your Honor, the suggestion is that if I have a cloud of

1 particles, and 10 percent of it is asbestos, and 90 percent is
2 something else, then when I take a picture, I will also see
3 10 percent of asbestos and 90 percent of something else.

4 The problem with that approach is that that assumes that
5 there's a linear relationship between the scattering of the
6 particles with the sizes that are in the respirable range over
7 the whole mixture that I have.

8 And so the problem is that in the Tyndall lighting
9 technique, which I said there were two things, one of them is
10 that the larger particles essentially scatter more light and
11 they scatter in a forward direction.

12 And the second part of it is, is that the smallest
13 particles from .01 micron to 3 micron cannot be seen at all.
14 So the technique essentially filters out all of the particles
15 that are too small. They're essentially below the threshold,
16 and they don't provide an impression onto the detector.

17 So to say that 10 percent was asbestos out of this total
18 cloud, and therefore I see 10 percent is completely false.
19 Because there is for the smallest one, a million times too
20 little light in order to even be able to make an impression on
21 that.

22 And so the imaging technique that is being used does not
23 represent the same ratio as what Dr. Longo indicates. In
24 fact, you won't see any of those fibers.

25 Q. Dr. Hesselink, you've laid all this out in your report.

1 Is there a couple of attachments to your report that identify
2 the equations that you're using, the measurements, and how you
3 setup your experiment; is that correct?

4 A. That's correct.

5 Q. And that information's available for anyone that would
6 like to try to reproduce it, correct? You provided that kind
7 of detail?

8 A. Yeah. We essentially wrote it up, Your Honor, to try to
9 get this published. I haven't done it yet. I've been very
10 busy with some other work. But we will do that. And I've
11 made it available to whoever wants to read this in this case.
12 So we have given all the data, all the information, and so
13 someone can actually do either the calculations or the
14 experiment.

15 MR. HARRIS: Thank you, Dr. Hesselink.

16 THE WITNESS: You're welcome.

17 MR. HARRIS: That's all. We pass the witness.

18 THE COURT: Why don't you start out back over here.

19 CROSS-EXAMINATION

20 BY MR. FROST:

21 Q. Are you ready, sir?

22 Good afternoon, sir. My name is Scott Frost. We've not
23 met before, have we?

24 A. No. Yeah.

25 Q. So sir, basically what your testimony comes down to is,

1 you disagree with Dr. Longo about whether you can see
2 respirable fibers using the Tyndall lighting method, correct?

3 A. That's -- well, I said exactly what I said. If you
4 prefer to be specific, I posed the questions, I answered those
5 questions. Your summary is, I think, reasonably accurate,
6 yeah.

7 Q. Okay. And in order to do that, you've done some
8 experiments. But you're getting paid \$600 an hour to be here?

9 A. No, not for the experiments.

10 Q. We're going to get to the experiments. But you're
11 getting \$600 an hour to be here, correct, to testify?

12 A. To be here, yes.

13 Q. Okay. And you were paid for those experiments when you
14 add it all up about \$50,000?

15 A. I believe that was about right, yeah.

16 Q. Okay. And the money you get paid, even though you may do
17 some work at Stanford, that money doesn't go to Stanford, it
18 goes to you?

19 A. No, not the \$50,000.

20 Q. How about the money you're getting paid, 600 per hour,
21 that goes to you, correct?

22 A. Yeah, the consulting arrangement we have at Stanford is
23 that would be income that would go to me, yes.

24 Q. Okay. So 600 an hour goes to you. The money that you
25 were paid for the experiment, some of it goes to you, some of

1 it may go to Stanford?

2 A. That's correct.

3 Q. Well, and part of that is because you use Stanford's --
4 some of their facilities and labs, right?

5 A. There are very strict rules about that, what you can and
6 cannot do, yeah.

7 Q. Right. And they want to make sure if you're using
8 Stanford's stuff, whatever you're doing, that they get
9 compensated for that, correct?

10 A. There are certain rules, yeah. There's a certain
11 threshold that if you actually exceed the threshold, then it
12 becomes a contract that would go to Stanford. If it is less
13 so incidental, it would not.

14 Q. Okay. Was this one that had to do that or was it
15 incidental?

16 A. It was relatively incidental, yeah.

17 Q. Okay. So this test that you did to determine whether
18 Dr. Longo's Tyndall lighting, you could see respirable fibers,
19 that really was an incidental test that you did at Stanford,
20 correct?

21 A. That was not my primary work, no.

22 Q. Now, you were first approached to review these videos and
23 do these experiments in 2004/2005, correct?

24 A. I got a phone call from Craig Woods and he asked me to do
25 that.

1 Q. That was in 2004 to 2005, correct?

2 A. That's correct.

3 Q. And in fact, if you had been approached, let's say in the
4 year 2000, 2002, in that timeframe, this same type of basic
5 research that you've talked about, this study that you did,
6 the incidental study, you could have done that back then,
7 right?

8 A. No.

9 Q. You couldn't have done it in 2000?

10 A. No.

11 Q. Why not?

12 A. As I said earlier, Your Honor, the experiments that I did
13 I could have done in the early 2000 timeframe, but the tools
14 that we used for the Finite Difference Time Domain solution
15 for Maxwell's equations were developed only late 2009/'10 or
16 somewhere in that timeframe.

17 Q. Okay. So the very last part you told us about, the
18 Maxwell's equation, with the little drawing and diagram,
19 that's something recent. But the actual experiment that you
20 did where you were looking at fibers, you could have done that
21 in 2000, right?

22 A. I could have done that in 2000, yes.

23 Q. Okay. So we'll separate those two out. There's nothing
24 that kept you from doing the hard science experiment, not the
25 calculation in 2000, correct?

1 A. I would say the calculation and also hard science,
2 they're very difficult to do.

3 Q. Now, when you began those experiments, you were first
4 contacted by the folks at ChemRisk, Amy Madl's one of those
5 people?

6 A. That's correct, yeah.

7 Q. And ChemRisk, the judge may have heard a lot about that
8 in the fact, but you're aware that ChemRisk is involved in
9 asbestos litigation, correct?

10 A. Only in a very peripheral way. I have no detailed
11 knowledge at all.

12 Q. Okay. But you're aware that the folks that were
13 approaching you, were approaching you to be a witness in
14 asbestos litigation and had published throughout the
15 literature on asbestos.

16 A. No, I did not know that they had published through the
17 literature in asbestos. I mean, there was some there and Amy
18 Madl was doing a Ph.D thesis in University of California,
19 Davis. And so after my first involvement in 2004/'05, I
20 essentially did theoretical calculations. I told you earlier
21 the Rayleigh regime actually has an analytical solution so you
22 can solve that problem analytically.

23 The Mei solution is more difficult because it is a
24 complicated mathematical series, and so I could not do that
25 part of it, but I could do -- reasonably I could do

1 calculations that would indicate whether or not you could
2 actually see these particles.

3 Q. And sir, I think we already went through that. The
4 question was, when you were contacted by the folks at ChemRisk
5 and Amy Madl, were you aware at that time that they were
6 involved in asbestos litigation?

7 A. Not in any detail, no.

8 Q. Did you check the literature to see if we type in Amy
9 Madl, whether she's written on gaskets, and whether that
10 gasket studies were funded by industry?

11 A. Well, it was a little bit different. So when I actually
12 wrote my first report, I was then approached by a few more
13 legal teams, and then I was approached by ChemRisk to see if I
14 could do some independent experiments to support the
15 calculation. It was also Craig Woods who originally talked to
16 me about doing these calculations. And so the question that
17 he asked was, is it possible that I can do some experiments at
18 Stanford to kind of substantiate the initial calculations that
19 I did. And I think there was then a group of supporters, and
20 I don't even know who actually was involved in that, who paid
21 for the \$50,000 study. It was my understanding that there
22 were a number of attorneys or legal firms that were part of
23 that.

24 Q. And so this number of attorneys and legal firms, you can
25 at least agree with me, sir, that these were all people that

1 were involved in defensive asbestos cases, not people bringing
2 cases on behalf of injured people?

3 A. I have really no knowledge of that. But I want to make
4 sure that you understand how I work.

5 I'm not a hired gun. I'm not doing any work for any
6 particular party. I'm not interested in giving opinions that
7 I don't have any opinion about or that I have knowledge about.

8 I was asked to look at the basic fundamental physics of
9 scattering from these particles using electromagnetic waves.

10 And so I was interested, but not to the point that this
11 became anything that I'm doing research on. I'm focusing on
12 other aspects of these light matter interactions. But it
13 seemed a reasonable thing to do to say, are these calculations
14 that I made in the beginning in 2004 and '5, are they actually
15 backed up by experiments so that it's not just a theoretical
16 exercise.

17 And so when Amy Madl and Craig Woods and others said we
18 can actually support that, and so would you be willing to do
19 that over a couple years, so with very low effort we set up
20 these experiments and carried them out.

21 Q. And sir, you don't see your role in legal cases being an
22 advocate, correct?

23 A. No. I'm actually giving you an independent opinion. And
24 I hope that I can give you, Your Honor, an independent
25 opinion.

1 In fact, in one case many years ago I was asked to give
2 an opinion that I did not agree with, and I stepped out of the
3 case and I didn't charge for that work.

4 Q. And sir, you were -- well, we can go forward and we'll
5 come back. Your resume was marked in evidence, I'm not sure
6 what it was, but you talk about your legal expertise, don't
7 you, sir?

8 A. Yeah.

9 Q. And in fact what it says is -- this one's a little dated,
10 I just looked at your one verified you've got it listed up to
11 2008, correct?

12 A. It's very well possible that's not all the way up to
13 date.

14 Q. Okay. Well, we're going to talk about both those things.
15 But at least in your resume of what you've listed under the
16 copy I had originally under legal expertise, 1983 to 2006, you
17 said, "I've been an expert witness in over 15 major cases and
18 I've never lost a case".

19 A. Yeah.

20 Q. Now sir, you're not a lawyer?

21 A. No, I'm not a lawyer.

22 Q. So when you say you've never lost a case, and it says,
23 "this includes expert witness services to multi-national
24 corporations including Sony, Phillips, Hughes, Aircraft and
25 Dolby, as well as smaller firms". How do you explain that?

1 Because lawyers lose cases, experts just give opinions.

2 A. This is not a legal statement. So all I'm saying is, is
3 that I'm not prepared to -- and I've been asked, Your Honor,
4 to give opinions that -- let me back up a little bit.

5 When I'm asked to do a case and become an expert witness,
6 the first thing that I say to the party is that I have to look
7 at the cases and in fact, and I have to determine for myself
8 as to whether or not there is a certain position based on the
9 science and the facts of physics that I know, that I can
10 support. And I'm not prepared to provide an opinion in court
11 with which I do not agree based on physics or my understanding
12 of technology.

13 And there have been a number of cases where I have
14 refused to be part of that because I have been in cases where
15 colleagues of mine were in front of your colleague, and they
16 would make statements, and find out and that their papers were
17 very different than what they present in court, and so this
18 caused a very great conflict. I'm not prepared to do that.

19 So in this particular case and any other case that I've
20 been involved in, I'm not saying that I never lost a case. I
21 mean, I'm not a lawyer. All I'm saying is, I've not been
22 involved in cases where I am not willing to do things that are
23 different. And I need to have a sense of understanding of
24 what the technology is in these kind of cases before I'm
25 prepared to do that.

1 Q. And sir, this is not the first time you've testified in
2 court about Dr. Longo's studies, correct? You remember
3 testifying in the Grigg versus Allied Chemical case. That was
4 in February -- March of this year?

5 A. That was my first time, yeah.

6 Q. Yeah. Your very first time you testified. And you
7 testified very similar to the way you've testified here,
8 correct?

9 A. I don't change the law of physics. I'm giving you
10 opinions as I understand them.

11 Q. Right. And so Dr. Longo testified in that case. That
12 was not a bankruptcy case. That was a case in the tort
13 system, correct?

14 A. I believe so, yeah.

15 Q. And you testified, and then the jury came to a verdict,
16 and you're aware, sir, that that was a very substantial
17 verdict for the plaintiff, correct?

18 MR. HARRIS: Well, hold on. I object, Your Honor.
19 He didn't testify at a jury trial. He testified at a pretrial
20 hearing and the Judge excluded Dr. Longo's videos. So
21 Dr. Hesselink was not asked to -- wasn't needed to come to
22 trial. So the Tyndall lighting videos were excluded. It's a
23 highly misleading statement the way Mr. Frost has asked it.

24 THE COURT: Well, sustain the objection.

25 BY MR. FROST:

1 Q. Sir, did you testify in that case?

2 A. Only with respect to the two questions that I was asked
3 here.

4 Q. Now let's go back a step to your expertise.

5 The Stanford -- not sure if I can read that -- the
6 Stanford Photonics Research Center, that's you, correct?

7 A. No, that's not me.

8 Q. Really?

9 A. You mean the picture? No. Stanford Photonics Research
10 Center is not me.

11 Q. Okay. But the picture is you?

12 A. Yes.

13 Q. Okay. You had me for a second, I thought I was wrong.

14 Okay. And we're talking about your training and
15 experience. There's nowhere up there where it talks about you
16 having any experience with asbestos, correct, sir?

17 A. I don't see that word, no.

18 Q. Okay. Well, in fact, what you do is, your training is as
19 a professor of electrical engineering, correct?

20 A. No.

21 Q. That's not what you're listed as, sir?

22 A. Well, I assume that you were here earlier in court, but I
23 have no degree in electrical engineering.

24 Q. Oh, well, that's why I was a little puzzled. Why did
25 they list you as -- that's you, right?

1 A. These are the intricacies of the academic world. So I
2 have a background in mechanical engineering, physics, applied
3 physics, electrical engineering constitutes conventional
4 design of circuits, constitutes analogue, digital, but it also
5 involves light matter interaction. It involves photonic
6 systems, networking systems, telecommunication systems and
7 optics. So it is very common that people with a applied
8 physics or physics have a position in electrical engineering.

9 Q. Okay. So now that we've cleared -- clarified that up,
10 you're not a professor of electrical engineering then?

11 A. That's not what I said. I said I am --

12 THE COURT: He's not an electrical engineer.

13 BY MR. FROST:

14 Q. And your areas of research -- I can only go with what
15 they put up.

16 Your areas of research are nanophotonics and optical data
17 storage, correct?

18 A. Those are part of it. So what you need to understand is,
19 you have my CV. So you can see exactly what I've published.
20 You can see exactly what I've been involved in. This Stanford
21 Photonics Research Center, is a center in which a number of
22 faculty belong, in applied physics, electrical engineering,
23 some of them in mechanical engineering, and I'm a member of
24 that Stanford Photonics Research Center.

25 I have done a lot of work in terms of light matter

1 interaction for storage. I've done it for visualization. I
2 teach courses in Maxwell's equations and solutions, that's all
3 part of this. Not all of that is represented in here.

4 Q. And I know, sir. I'm just trying to -- I've looked at
5 everything that's available that you've published, and you
6 have not published a single article on asbestos, have you,
7 sir?

8 A. I never made that statement, either.

9 Q. I know you didn't, sir, but we're trying to deal with
10 your qualifications. So if I look to see what your areas of
11 expertise are in the scientific community, it's that you have
12 certain expertise, but none of those are asbestos. You've not
13 listed those, you don't have peer-reviewed articles on those,
14 correct?

15 A. I believe that you've accepted me as an expert in the
16 light matter interactions. I don't think I was introduced as
17 an expert in asbestos.

18 Q. Correct, sir, and that's my point is, you haven't
19 published any peer-reviewed articles on asbestos. You haven't
20 published this particular work that you've talked about on
21 asbestos, correct?

22 A. I have not yet published that, that's correct.

23 Q. Okay. So let's move on to Tyndall lighting. You would
24 agree with me, sir, that this Tyndall lighting effect that
25 Dr. Longo has used, has been noticed and used throughout

1 science since the 1800s, correct?

2 A. Only partially correct. If you look at the details of
3 how small particles actually interact with these light beams,
4 and how they then propagate and provide an image onto the
5 camera, some of those details are not well understood. And so
6 that's why in this particular case we have a cloud of these
7 particles, you need to look at the interactions. It's a very
8 complicated, very difficult electromagnetic interaction
9 process. And that's why I did these careful experiments to
10 make sure that I could answer the question that was stated.

11 Q. And sir, if you would answer my question, we'll get done
12 and we'll all be able to go home today --

13 A. I'm not --

14 Q. The question is, will you agree with me that this Tyndall
15 lighting was a well used and well-understood method for
16 visualizing objects beginning in 1800s with Sir Tyndall?

17 A. With all due respect, sir, I'm just telling you that it
18 is not well-understood method in terms of what the lighting
19 physics is. If you're saying is this a method that has been
20 used to create pictures that you can actually see particles
21 there that move and you see them and you can't see them with
22 normal light, then that's probably true. But it is not a well
23 understood and detailed method and there's still research
24 going on.

25 Q. Okay. And sir, you're aware that companies such as Union

1 Carbide published in the 1960s, this phenomenon. This isn't
2 something that Dr. Longo came up -- you're aware of this,
3 correct? That Union Carbide in their toxicology report
4 indicated and was quoted, "This dust concentration of 5
5 million particles per cubic foot of air is a threshold limit
6 value for asbestos. This concentration of dust is generally
7 not visible in the average work area, unless a beam of light
8 causing a Tyndall effect is present. Usually the dust
9 concentrations must be from 8 to 10 million particles per
10 cubic foot before its presence is visible in average lighting
11 conditions".

12 Sir, is this something you've studied?

13 A. If you had maybe listened to what I just said, then you
14 could maybe recall. The issue is not whether or not you can
15 talk in particles, and this is the problem which we have here.

16 You can't make generic statements and say, these are
17 particles. If the particles are 5, 10, 20, 100 microns and I
18 have a very strong light beam and I have a certain optical
19 configuration, maybe under those circumstances I can see tens
20 of microns of particles.

21 In this particular reference that you refer me to, there
22 is no size. There is no intensity. There is no optical
23 arrangement, there's nothing. So I'm not prepared to give a
24 generic answer to a case which is very fake.

25 That's why if I can help the Court in any other way, I'm

1 doing this on the basis of a very well-defined question, and
2 I'm giving you a very well-defined, reasoned answer. I hope I
3 did that. And that's what I'm willing to do. But in this
4 particular general case, I can't really say if this is true or
5 not true.

6 Q. Well, sir, you're aware of the methods for determination
7 of hazardous substances, the dust lamp, correct? You've seen
8 this document, this isn't something new, correct?

9 A. I have seen the dust lamp document, yes.

10 Q. And -- well, and actually you cite that in your work,
11 right?

12 A. Yes.

13 Q. Okay. And so the main use of the dust lamp, it says, is
14 to "make fine airborne particles visible, i.e., particles
15 below" -- and what does that stand for, sir?

16 A. What stands what for?

17 Q. Is that 10 micron?

18 A. Approximately 10 micron.

19 Q. Okay. "Usually termed respirable". And that's the issue
20 that you're trying -- the question here that you're saying
21 your studies answer, is whether particles that are respirable
22 are visible using this Tyndall lighting method, correct, sir?

23 A. No. I'm just saying that -- what I stated was, is it
24 possible that I can see these bright spots are being
25 representative of single particles of asbestos in the

1 respirable range from 0.01 to 3 microns. That was the answer
2 to the question that I gave.

3 In this particular case here, it doesn't say what the
4 concentrations are. It doesn't say what the geometry was.
5 Doesn't say what the setup that was used. You have to be
6 specific in order to be able to answer the question. That's
7 why I brought up these quotes from Dr. Longo. It's not that
8 I'm doing this out of the blue sky. I'm doing this on the
9 basis of a very well-defined question that was based on the
10 statements that Dr. Longo made.

11 Q. Well, in fact, sir, this is a article -- not just an
12 article. This is the method for determination of hazardous
13 substances by the Health and Safety Laboratory of England.
14 This is the English government establishing a procedure to do
15 exactly what Dr. Longo did, correct, sir? And they go through
16 detail after detail exactly how to do that?

17 A. No. This article describes the generic setup. It does
18 not describe any specific way of determining whether or not
19 you can visualize respirable particles under the conditions
20 that Dr. Longo used for his optical setup. This is not --

21 Q. And sir, you haven't reproduced Dr. Longo's setup,
22 either, have you? You conducted your own --

23 A. No. I did. I did. No, I did use for the experiments
24 that we did, we used the same parameters that Dr. Longo used.

25 Q. Let's make sure the record's clear, sir. You did not

1 conduct an experiment that replicated what Dr. Longo did,
2 correct, sir?

3 A. You mean, did I set up a laboratory in which we would
4 actually cut materials and then visualize them?

5 Q. Correct.

6 A. No, I said what I did. I said -- I answered his
7 question, and that's all I have done.

8 Q. Right. And we're going to go through your study quickly,
9 sir. But you would agree with me, that at least as far as
10 this article is concerned and this method that they talk about
11 seeing particles that are less than 10 microns, not the limits
12 that you were talking about, correct? And it identifies them
13 as being respirable, correct?

14 A. No. You're mixing up certain things. 10-micron
15 aerodynamic diameter. This is not the aerodynamic diameter
16 that we talked about. I talked about the physical
17 diameter which is .01 to 3 microns. That's what Dr. Longo
18 said that he measured. Aerodynamic diameter is different from
19 the physical diameter.

20 Q. Sir, have you seen Dr. Longo's rebuttal report where he
21 talks about measuring fibers up to 10 microns?

22 A. I have devoted my energy to answer these two questions.
23 I'm not an expert on the techniques associated with asbestos
24 or measurements.

25 Q. And so it's clear, sir, you're not an expert on air

1 monitoring and air monitoring results and things like that,
2 correct, for -- concerning asbestos?

3 A. Yeah. When the data came up and it said, you know, the
4 documents that Dr. Longo quoted about the numbers of fibers
5 per cc, I have no way of telling if that's correct or not
6 correct. All I did is, I said, that's the data that he
7 presented and I'll be willing to answer that on the basis of
8 the things that I investigated.

9 Q. Okay. Well, let's move on, sir. And one of the
10 criticisms you've had is somehow that Dr. Longo used some
11 off-the-shelf video camera. That was some of the things
12 you've been critical of, correct, sir?

13 A. What I was critical of was, is that the optical geometry
14 that Dr. Longo used, involved the physical -- or off-the-shelf
15 camera. That was not the point.

16 The point was, is that in this particular configuration
17 he used a optical setup that reduces the resolution of the
18 imaging system. And so if I can't see it with my naked eye, I
19 certainly can't see it with the setup that is produced in the
20 Tyndall lighting. And so it's a different phenomenon. That
21 was my criticism.

22 Q. Okay. And, sir, actually this issue, the methods for
23 determination of hazardous substance is, the HSE document,
24 actually talks about using off-the-shelf photography, don't
25 they, sir? You've seen that, right?

1 A. In the generic Tyndall lighting geometry, you can use
2 off-the-shelf components. That's not the point. The point
3 is, is that optical system capable of imaging or recording the
4 light that is scattered from these particles onto that camera.

5 Q. And in fact, they recommend people using compact video
6 cameras, SLR cameras, cameras that have 400 speed film.
7 That's all things that they recommend when they're dealing
8 with this issue that's separate from what Dr. Longo did,
9 correct?

10 A. This is the description of the generic technology. It is
11 not the description of the specific problem that we addressed
12 here.

13 Q. And in fact, they talk about using small video recorders,
14 exact same thing that Dr. Longo did?

15 A. But they didn't put in here that you could actually see
16 particles from the .01 to 3 micron respirable rates.

17 Q. Right. Because what they were talking about is
18 10 microns. That's what they considered to be respirable
19 aerodynamic diameter, correct, sir?

20 A. No, sir. What it says is that, the main use of the dust
21 lamp is to make fine airborne particles visible. It doesn't
22 say if there is one particle there. It doesn't say there was
23 10 there. Doesn't say there was a million there. Doesn't say
24 there was a billion there.

25 This technique has been used for years, Your Honor, to

1 determine air flow. You have particles in the air. You
2 scatter light off of it. And you see the generic underlying
3 flow patterns. These technologies have been around. But --

4 Q. And that's my point --

5 A. -- under the circumstances that I was careful to frame my
6 question here was, is, under those circumstances that
7 Dr. Longo says that you can see the breathable -- respirable,
8 I should say -- asbestos you cannot do that with this setup.

9 Q. You would agree with me that the general methods that
10 Dr. Longo did using the Tyndall lighting as a method, that
11 that was something that has been used in science prior to
12 Dr. Longo as we have seen by the EPA and the folks over in
13 England, correct, sir?

14 A. The general method of Tyndall lighting has been around
15 for a long time.

16 Q. Now -- and you're aware, sir, that the EPA actually has
17 an SOP for dealing with this? You've cited this in your
18 report?

19 A. Yeah.

20 Q. It's SOP EPA Libby 02 that was done in 2001. You've seen
21 that, correct?

22 A. Yeah, I believe that's correct.

23 Q. And again, they talk about using video cameras. And they
24 say off-the-shelf video cameras, and they talk about using
25 Tyndall lighting. So the EPA even recognizes you can use

1 off-the-shelf materials even as of 2001, correct, sir?

2 A. I don't think I ever criticized the fact it was
3 off-the-shelf equipment.

4 What I criticize is that the statements that Dr. Longo
5 made, the two questions that I answered -- in fact, the three
6 questions, are not correct.

7 Q. And sir, do you even have any understanding of why the
8 EPA created this procedure for Tyndall lighting?

9 A. I'm not an expert on that EPA.

10 Q. And we'll go through very quickly this last little bit.

11 Your experiment, it was to aim a laser at a single
12 asbestos fiber and fiber bundle that you had glued to a piece
13 of metal; isn't that correct?

14 A. That's what I stated.

15 Q. Okay. And I have a picture up there, but where's the
16 videotape? We saw videotapes from Mr. Boelter, and we saw
17 videotapes for Dr. Longo. Did you forget the videotapes?

18 A. Did I take videotapes?

19 Q. Yeah.

20 A. Of what?

21 Q. Of your experiment, so we could all watch it and see
22 exactly what you did, and see if he could see anything.

23 A. I'm not sure if you've read my report. But in the report
24 it usually states what we did. And so we followed a
25 scientific method. So this report, Your Honor, was prepared

1 as being prepared for a scientific journal. You don't put a
2 video in a scientific journal.

3 But what we did was, is, we took -- and I essentially set
4 out all of the details of the experiments so that if you or
5 Dr. Longo or somebody else wants to redo these experiments,
6 you can do them.

7 The key point was, is that in order to be able to analyze
8 the scattering from a single particle, and whether or not the
9 answer or the question that I posed on the basis of what
10 Dr. Longo said is important that you measure the scattering
11 cross section. That's the standard scientific methods for
12 addressing this product -- this problem.

13 Q. Sir, did you take a videotape of the experiment that you
14 did; yes or no?

15 A. We took a video and we took still pictures, yes.

16 Q. Where are they?

17 A. They're in the report. The pictures are in the report.
18 There's no video in there because there's nothing to see.

19 MR. FROST: Have you produced that video to us?

20 MR. HARRIS: I don't know what video you're talking
21 about.

22 THE WITNESS: The video is, if you look in the
23 report, there is a description there of -- we have a camera
24 that essentially is looking at the particle and there is
25 nothing that we can see.

1 BY MR. FROST:

2 Q. Okay.

3 A. And that is in the report.

4 Q. Sir --

5 A. Yeah.

6 Q. I understand the video camera is listed in the report,
7 but you didn't keep the videotape and that hasn't been
8 produced in this litigation, has it, sir?

9 A. We have produced everything that is needed in order to
10 answer this question. If you can't see it -- this was the
11 whole point, Your Honor, so --

12 Q. Sir --

13 A. No. No. May I answer your question just for one minute?
14 Okay.

15 THE COURT: Let him answer the question.

16 THE WITNESS: The point, Your Honor, is, is that if
17 I show a video that shows nothing, it's black. Then the
18 normal criticism that I would have is, you probably didn't try
19 hard enough. And so if you actually don't have enough light
20 or whatever, you don't see anything. Okay. So that was not
21 sufficient.

22 What we did was, is, we then went to and did a very
23 detailed analysis and measurement of what the scattering cross
24 section is. We compared it against what the level of
25 intensity is that the video camera required, and we then did

1 take these measurements and we can't see anything. The video
2 is black.

3 So we then showed under certain circumstances you
4 could get very faint images if you make the images of the
5 objects large enough and that's all in the report.

6 BY MR. FROST:

7 Q. I understand, sir. The only question is, have you
8 produced in this case, a copy of any videotape of the
9 experiment that you did; yes or no?

10 A. No, I have not made any copy. I've given you everything
11 that you need in the report.

12 Q. Now -- and everything in that report has never been
13 subject to peer review, correct?

14 A. Not yet, no.

15 Q. Let's go on. Now, you're not an expert on the actual
16 size ranges of respirable fibers, correct?

17 A. I believe I said a number of times, I'm not a industrial
18 hygienist or an expert on asbestos.

19 Q. Right. So you're not an industrial hygienist. You're
20 not an expert on -- if we put a chart up there that said the
21 different fiber levels of working with gaskets or packing,
22 you're not an expert on any of those?

23 A. I'm not sure I understand what you're saying.

24 Q. Well, I think that's probably because you're not an
25 expert on it, but I just need it for the record.

1 The air monitoring studies. You've never done any air
2 monitoring studies yourself concerning asbestos, correct?

3 A. I've not done any air monitoring.

4 Q. Okay.

5 A. I have no opinion about it. That's what I said in my
6 testimony.

7 Q. And you're not -- are you aware that Dr. Longo has
8 indicated that respirable fibers are 1 to 10 micrometers, not
9 this .5 that you've been talking about?

10 A. I think I showed the Court, Your Honor, where Dr. Longo
11 says respirable is less than 3 microns. But if you look at
12 Longo's -- Dr. Longo's reports and his testimonies over the
13 years, the numbers vary dramatically. Originally it was that
14 you could see particles from .01 to .05. And then it
15 became .01 to 1 micron. Then it became .01 to 3 microns. And
16 now you're quoting something 10 microns, but then it is
17 aerodynamic.

18 I think his statement was, and I think it's consistent
19 with what I read in the literature about this, is that, that
20 was the range over which respirable fibers vary from .01 to
21 3 microns.

22 Q. And sir, we're going to try to move things along, but
23 this is a quote out of the first document that I talked to you
24 about.

25 Have you reviewed this where it talks about the dust lamp

1 being a simple qualitative tool for making fine particle
2 clouds visible or enhancing the visibility of partial visible
3 clouds? Have you seen this and reviewed this before? Do you
4 disagree with this statement, sir?

5 A. Well, you know, it's -- first of all, you have to not
6 talk about this in generic terms. It's a simple qualitative
7 tool. So qualitative means that it is not quantitative. It
8 does not, essentially, allow you to do a measurement and say,
9 I can find out how much light that is coming out of these
10 particles. So it's a qualitative tool.

11 And clouds and particles or enhancing visibility of parts
12 of clouds. Yeah. I mean, if I would turn on a Tyndall
13 lighting system here -- in fact, you probably have seen it,
14 Your Honor, when the sun comes through the window and you have
15 the parallel light from the sun, you sometimes can see a lot
16 of light scattering from particles in the room.

17 And so, does that enhance the visibility? The answer is,
18 yes. But that's not the question that I answered.

19 Q. Right. And you've made a very specific question about
20 very small fibers where you basically taped them to something
21 and put a light on them to see whether you could see them
22 using a laser or a light source, correct?

23 A. That is the scientific way of solving a problem.

24 Q. And the scientific way that you chose to do that is, you
25 used a 100-watt bulb in your study, correct?

1 A. That's part of the story --

2 Q. And Dr. Longo --

3 A. -- that's not the key point.

4 Q. Okay. Well, we're going to walk through that quickly.

5 But you used -- you would agree with me that you used
6 100-watt bulb in your study, and Dr. Longo used a 750-watt
7 bulb, actual multiple lights in his study, correct?

8 A. In some of our studies that's what we used, yes.

9 Q. Well, in fact, the study that you've talked about here,
10 it's 100-watt bulb, correct?

11 A. Yeah. We also used a laser.

12 Q. I know, but I want to talk about the bulb.

13 A. But you have to be careful. You're asking me specific
14 questions, I'm trying to give you specific answers.

15 Q. Sir, when you used the lighting that you used the bulb,
16 you used 100-watt bulb?

17 A. In some of the experiments we did.

18 Q. Okay. And instead of doing a large enclosure, you used a
19 very small enclosure, correct?

20 A. Yeah. So, Your Honor, what is important is not the total
21 amount of light that comes out of the light bulb. What is
22 important is, is how many of those photons -- so you could
23 actually think of light source as being a source in which the
24 particles -- think maybe about it as tennis balls or something
25 similar to that.

1 So the light source sends out 3 times 10 to the 18 of
2 these particles out. They go over a certain area. What
3 matters is, is how many of those ping pong balls or whatever
4 they are, hit that particular target.

5 So it's the irradiance, which is the number of photons
6 per unit area, per the raidum, which is just a technical term.
7 It's not the total number.

8 And so because of the fact that we didn't have to look at
9 the large area where we only look at a small object, in this
10 case the fiber, it's sufficient that the intensity of the
11 stream of photons that is incident on the fibers, it's the
12 same as what was used in Dr. Longo's experiments, and that's
13 what we did.

14 Q. And sir, if we did that same experiment that you did in
15 20 by 15 by 8-foot enclosure, wouldn't we see 75 to 100
16 million fibers of asbestos in there if we are doing a
17 work-practice simulation? Or is that something you're just
18 not aware of because you did your study in a small enclosure?

19 A. No. The issue is that, could it be possible that these
20 bright spots that we see on the image on Dr. Longo's video, be
21 the result of scattering from respirable particles in the
22 range from 0.0 to 3 microns? And the answer to that is, no.

23 Q. I understand, sir. The question is, is you're not aware
24 of how many fibers would be in a chamber like Dr. Longo's
25 chambers or Mr. Boelter's chamber if we were doing a

1 work-practice simulation. You have no idea how many billions
2 of fibers might be in that chamber, versus looking at one
3 fiber bundle the way you looked at it, correct, sir?

4 A. No, it's not correct.

5 Q. Now --

6 A. Because I know what the density is that Dr. Longo claimed
7 that he measured. I can multiply that in order to get it over
8 a total area and so I can make an estimate of how many
9 particles potentially that could be there, assuming that these
10 measurements were correct, which I have no way of knowing.

11 Q. And sir, when you did your study and you used that
12 100-watt bulb, you're aware that there are standard procedures
13 and they talk about using -- when you're looking at this
14 Tyndall lighting and whether you can see fibers or not, they
15 look at using bulbs that are a lot more powerful. In fact,
16 what they recommend is 1,000- to 2,000-watt Tungsten halogen
17 bulbs; you're aware of that, correct?

18 A. I think you missed the point. The point that I just
19 explained to Your Honor was that it is not the total power.
20 In this particular case, you might expect that someone said
21 you want to use for a certain field that you have, a certain
22 light source so that you get enough illumination. And so, you
23 know, if you want to essentially illuminate this whole room,
24 you need a lot more light than if you're actually sitting in a
25 very small chamber and you want to read your light, or in your

1 airplane. So that's not the key issue.

2 The key issue is, what is the density of the intensity of
3 the light that is incident on that scattering particle.

4 Q. And sir, prior to coming up with your experiment, you
5 never read Dr. Longo's peer-reviewed article on his Tyndall
6 lighting and his Gasket IV, did you, sir?

7 A. I think I've told you what I --

8 MR. HARRIS: I object to the extent that I don't
9 think there's any article that's published on Gasket Study IV
10 or his Tyndall lighting. That just is a complete
11 misrepresentation of what he says.

12 BY MR. FROST:

13 Q. Did you review Dr. Longo's peer-reviewed article prior to
14 doing your experiment?

15 A. I think I've given all the references that I reviewed,
16 and I essentially addressed the question, and so that's what
17 I'm really prepared to answer. So there may be lots of
18 information out there in the literature, but that was
19 irrelevant to what I needed to do.

20 Q. Dr. Longo's peer-reviewed study was irrelevant to your
21 test?

22 A. I'm not aware that he has a peer-reviewed article, so...

23 Q. Now, sir, if your premise and test is correct, and if an
24 individual is doing a Tyndall lighting demonstration, and
25 we're not talking about using gaskets, but we're talking about

1 a product that is 100 percent asbestos, then everything you've
2 told the Court right now that shouldn't be able to see certain
3 things in certain lights, that should all apply, right?

4 A. The basic physics will apply, yes.

5 Q. Okay.

6 A. But, you have to be a little bit careful. And I've seen
7 this particular article on Dr. Longo where he says, I take a
8 bag with asbestos fibers and I can see it.

9 Q. Well, in fact, sir, we're going to play for the record
10 Dr. Longo's demonstration using Tyndall lighting. This is a
11 100 percent chrysotile asbestos. 7-M asbestos. Do you know
12 what 7-M asbestos is?

13 A. I'm not an expert on asbestos.

14 (Video playing.)

15 Q. Sir, I want you to take -- that's Dr. Longo pouring a bag
16 of pure asbestos, 7-M asbestos chrysotile using the exact same
17 format. You would at least agree with me, sir, that what we
18 can see there, using 100 percent asbestos is the same types of
19 things you said you couldn't see in the gasket study?

20 A. Maybe I didn't do a good job explaining what the
21 situation was. But when I said, why can you see the blue sky.
22 The particles in the blue sky, Your Honor, are smaller than a
23 .01 micron. They are probably 100 times smaller than that.
24 But there are 10 to the 23rd or so particles per cubic
25 centimeter. And the light that goes through the atmosphere is

1 several, probably 10 kilometers long. And when you look at
2 all of the scattered light, you can see the blue sky. But the
3 scattering from each one of the particles is very small.

4 That bag, Dr. Longo could barely lift it. That bag is --
5 how much did it weigh; 25 pounds perhaps? So there are
6 billions, and billions, and billions of particles in there and
7 they together can scatter. There's absolutely no doubt. If
8 you got enough particles there, and you have billions of
9 trillions of them, you can actually see scattered light from
10 that.

11 Now if that's 100 percent asbestos, I don't know.
12 Because I don't know if there is anything else in the bag or
13 if there's anything on the outside of the bag. But that's a
14 completely irrelevant comparison with the question that I
15 stated.

16 Because the question I stated and what he said could be
17 done is, can you see an individual particle.

18 Q. Right. And I think that's where you and I have a
19 disagreement. You want to deal with just a single individual
20 particle. But what Dr. Longo is demonstrating is that there
21 are fiber bundles, there's also large particles. And if you
22 take something that's 100 percent asbestos, a bag of
23 100 percent asbestos, cut it open, pour it into a 55-gallon
24 barrel with Tyndall lighting, you still can see things,
25 correct, sir?

1 A. I said if you took one purely asbestos particle, and put
2 it into the Tyndall lighting, you would see nothing. And so
3 if you put billions and trillions of them, yeah, you see
4 scattered light from it. But that's a very different thing
5 than what he said before, and it is irrelevant to the question
6 that I answered.

7 Q. And sir, how many asbestos fibers are there in, say, like
8 a thimble?

9 A. In a what, sorry?

10 Q. Thimble.

11 A. I don't know what the concentration is.

12 Q. If it was billions or trillions, would that surprise you?

13 A. I don't really want to speculate on things that are not
14 related to what I testified on. I'm here to help the Court,
15 hopefully, to kind of get an opinion about can it be that
16 these white spots in the video are caused by single or
17 breathable fibers in that range from .01 to 3 microns, and the
18 answer is no.

19 Q. And if there could be billions of fibers in that air,
20 then you wouldn't have the answer to that question whether you
21 could see it using Tyndall lighting, correct, sir?

22 A. I'm perfectly willing to answer a well-posed question
23 that you come to me for and I will be able to investigate and
24 I can tell you what's possible and what's not possible.

25 Q. So you don't know if there were billions of fibers in the

1 air, whether you could see them or not?

2 A. Could you tell me what the size is? What the density is?
3 What the intensity of the light is? How the camera is
4 connected to the optical system? What the magnification is?
5 The polarization is? I'll answer your question.

6 Q. Okay, sir, so as we sit here today, you don't have an
7 answer as to whether there were billions of fibers in the air,
8 whether you could see those using Tyndall lighting, correct?

9 A. I think I've given my opinion about what you can and
10 cannot see. I just did it a few minutes ago. If you have
11 billions and billions of them.

12 Q. And I thought your answer was you could see them?

13 A. You can see them if you have billions and billions of
14 particles -- ultimately, I mean, what I said was, that if the
15 concentration is off by three orders of magnitude, then you
16 probably could see it. So if you have billions times more,
17 yes, you will be able to see scattered light coming from them.

18 MR. FROST: And Your Honor, we would offer as ACC
19 3692, the Environmental Protection Agency Region 8 SOP Libby
20 02, which was referenced.

21 We would offer as ACC 3691, The Methods for
22 Determination of Hazardous Substances, that was referenced.

23 We would also add as ACC 3849, a copy of the
24 PowerPoint.

25 And then as 3850, a copy of Dr. Longo's video that

1 was played.

2 Otherwise I pass the witness.

3 MR. HARRIS: I've got objections to this. Do the
4 documents that they're offering, those I think would fall
5 under the learned treatises and they're not admitted into
6 evidence, and so I don't -- I think those documents are
7 objectionable because they're hearsay.

8 MR. FROST: Your Honor, just to clarify that. I'll
9 offer those pursuant to Rule 104 purposes.

10 MR. HARRIS: I don't know which PowerPoint he's
11 referencing there.

12 MR. FROST: Just the slides that we used.

13 MR. HARRIS: Oh.

14 MR. FROST: So they're marked for the record.

15 MR. HARRIS: So they're marked for identification
16 purposes. Sure.

17 (ACC Exhibits No. 3691, 3692, 3849 and 3850 were
18 received into evidence.)

19 THE COURT: Mr. Guy, do you have questions?

20 MR. GUY: Yes, Your Honor. May I examine the
21 witness from here?

22 THE COURT: Yes, sir.

23 CROSS-EXAMINATION

24 BY MR. GUY:

25 Q. Dr. Hesselink, good afternoon.

1 A. Good afternoon.

2 Q. My name is Jonathan Guy. I represent the Future
3 Claimant's Representative, Mr. Grier. I have a couple
4 questions for you.

5 A. Could you maybe go to the other microphone?

6 Q. Sure. My first question was going to be why did you ever
7 leave The Netherlands, my favorite place? Let's ask you
8 something substantive.

9 A. I will tell you the story some day.

10 Q. Well, at least you're in Palo Alto.

11 Have you ever testified at trial concerning Garlock's
12 gaskets where Dr. Longo testified at trial also?

13 A. I mean, I only have testified in a prehearing once.

14 Q. So you've never testified where both you and Dr. Longo
15 are testifying to a jury, correct?

16 A. No.

17 Q. Have you ever testified at trial concerning a Garlock
18 gasket? I think the answer's no, but just so we're clear on
19 the record.

20 A. Yes.

21 Q. Now you said before that you're not a hired gun, and I'm
22 absolutely not suggesting you are. But in your world, and
23 this was your phrase, what's a hired gun in the expert world
24 in your opinion?

25 A. Well, I think, Your Honor, I gave some examples of that.

1 I've been in one case, or actually several cases with a
2 colleague of mine, and he essentially was espousing technical
3 matters that were in direct conflict with articles that he's
4 written. This book -- two books that he had written.

5 And so there was a dispute about a definition. And so he
6 took a position that was counter to things that he would have
7 never done in his scientific career. And it was apparently in
8 the interest of the case that he made those comments. And to
9 me, that is an unacceptable situation. I'm not prepared to do
10 that.

11 So I haven't really thought about what a hired gun in
12 this world is, but I would think that that's one
13 characteristic I would ascribe to it.

14 Q. I think that's a great definition. Thank you,
15 Dr. Hesselink.

16 THE COURT: Thank you.

17 Anything else, Mr. Harris?

18 MR. HARRIS: Just a couple of things, Your Honor.

19 REDIRECT EXAMINATION

20 BY MR. HARRIS:

21 Q. I'm going to go back to this business about the physical
22 diameter of the fiber versus the aerodynamic diameter of a
23 particle.

24 Mr. Frost flashed up some testimony, I believe from the
25 Grigg trial. And I think you were -- Dr. Longo was saying the

1 diameter's 1 to 10 microns. Do you remember that?

2 A. Yes.

3 Q. And so this is actually the testimony that Dr. Longo gave
4 in his deposition in this case where he was talking about the
5 physical diameter of the fibers that are maximum for
6 respirable, and he actually says 3 microns.

7 Is your understanding that when we speak of respirable
8 particles being larger than 3 microns up to 10 microns, that
9 that's in connection with being the aerodynamic diameter,
10 which is an entirely different calculation than the physical
11 diameter?

12 A. Yes, Your Honor. I think I said that a couple of times.
13 It is the physical diameter that we are talking about here
14 that is 3 microns.

15 Q. All right. This is what Dr. Longo's position was when we
16 deposed him in this case. Maybe he's changed, I don't know
17 that.

18 Let's talk about the 100-watt bulb versus the 1,000-watt
19 bulb or higher density. Can you explain to us again why is it
20 that it doesn't matter that you used 100-watt bulb in your
21 laboratory, versus the 750- or 1,000-watt bulb that Dr. Longo
22 used in his chamber?

23 THE WITNESS: Would Your Honor allow me to go to the
24 board again?

25 THE COURT: Yes.

1 THE WITNESS: Your Honor, if you look at this part
2 of the setup. This is the light emitting portion of the light
3 source. It typically sends out light in all directions or at
4 least into a cone. This is essentially referred to as
5 spherical (indiscernible), so it's a portion of the sphere.
6 Then there is a lens. And the lens essentially then focuses
7 or collimates the light in this particular case.

8 As you can see, there's only a very small fraction
9 of the light that will pass through this pinhole. So if this
10 is actually a plate that only has a very small hole in it, say
11 10 microns, all these photons that come from the light will
12 not go through that hole, and so the light that is delivered
13 at this point, is only associated with that small fraction of
14 the photons that pass through that aperture. All of these are
15 essentially wasted.

16 Now, why didn't we use another light source? Well,
17 this is one that we had available and that was suitable for
18 the case. But if you look at the number of photons or the
19 intensity of the light that comes from this small aperture and
20 that hits the target, the number of photons or the intensity
21 of the irradiate as this is referred to as the number of watts
22 per square meter per steradian is similar to what Dr. Longo
23 had.

24 So if you actually wanted to see the larger area,
25 then you would also have to have more power in order to be

1 able to come to a similar configuration. But since we're only
2 doing the one scattering from one particle, we actually set it
3 up so that the experimental conditions were the same as was
4 Dr. Longo.

5 Q. And did you calculate the light density to make sure that
6 what you were doing was right in line with what Dr. Longo was
7 doing?

8 A. Yeah, in fact we did a little bit more, Your Honor. We
9 actually also put in a equation that essentially allows you to
10 scale, based on the intensity and magnification and other
11 parameters that are in the typical setup, so that you actually
12 can work out whether or not you should have a stronger or
13 weaker light source, or what you can use for a specific setup.

14 Q. All right. This is just the laser graphic if you needed
15 that.

16 I would like to close, Dr. Hesselink, by going back to
17 something Mr. Frost raised. There was this case earlier this
18 year called Grigg that was pending in Alameda County, Oakland,
19 California; is that your understanding?

20 A. Yes.

21 Q. You testified at a hearing that was to determine whether
22 Dr. Longo could display his Tyndall videos to a jury; is that
23 correct?

24 A. That's correct, Your Honor.

25 Q. You were actually engaged by Owens-Illinois to testify at

1 that hearing, correct?

2 A. That is correct, Your Honor.

3 Q. You testified, Dr. Longo testified; is that correct?

4 A. Dr. Longo testified via video link.

5 Q. And the Court then decided to exclude Dr. Longo's videos
6 so they would not be displayed to the jury, correct?

7 A. That was my understanding. That's what I was told.

8 Q. I've displayed the Order. And so you did not come and
9 testify at the trial; is that correct?

10 A. That was not necessary.

11 Q. All right. Thank you, Dr. Hesselink -- wait a minute.

12 Let me just ask you, there was that video that Mr. Frost
13 displayed of the 7-M chrysotile studies; is that correct? Do
14 you remember that being part of Dr. Longo's report?

15 A. Yeah.

16 Q. Now again, why is it that 7-M chrysotile or the pouring
17 of that chrysotile would scatter sufficient light to be
18 visible under the Tyndall lights? It had to do with
19 concentration; is that right?

20 A. Yeah, I think I explained to Your Honor that was the
21 case. I mean if you -- so this is the experiments that I did
22 is to determine what is the scattering cross section as it is
23 called, Your Honor, from one single particle.

24 And so you have one particle, it scatters a little bit of
25 light. I get a second particle, it scatters a little bit more

1 light. If I get a third particle, it scatters a little bit
2 more light.

3 If I fill this whole volume with literally trillions, and
4 trillions of particles in there, then that whole cloud of
5 particles will scatter a whole bunch of light.

6 And so what you see in that and what you saw is more or
7 less uniformed totally saturated on the camera white image,
8 which is indicative that you have a very large number of very
9 small particles, which is totally different from saying that
10 the bright spots that I have on the video that Dr. Longo
11 showed, that those are responsible and visualized for
12 particles that are in the range of .01 to 3 microns. That's a
13 completely different problem.

14 Q. Right. And the concentration of pouring a whole bag of
15 chrysotile is going to be much, much higher or is the
16 magnitude higher than the concentrations that Dr. Longo
17 reported; is that correct?

18 A. Not orders of magnitude. Okay. There are about 1
19 micron, let's say. And so that means there is 1,000 by 1,000
20 by 1,000, so that's a billion in roughly this size. Plus this
21 was a big bag, and so I don't know what there is. So there is
22 billions of these particles in there.

23 MR. HARRIS: Thank you, Dr. Hesselink.

24 THE COURT: Thank you. You can step down.

25 MR. FROST: Your Honor, just one question briefly.

1 THE COURT: Okay.

2 RE CROSS-EXAMINATION

3 BY MR. FROST:

4 Q. On that last issue, Doctor, are you aware that that exact
5 same -- not that Dr. Longo's videos have been allowed to be
6 used in Alameda County, particularly in Bissett case, is that
7 something you're aware of?

8 A. I'm not a legal expert. I can only tell you what I did.

9 MR. FROST: Okay.

10 THE COURT: All right. Thank you, Dr. Hesselink.
11 Appreciate your input.

12 Why don't we take a break now and then what do we
13 have left we're going to try to do today?

14 MR. HARRIS: We have Mr. Boelter that is coming back
15 to testify for just 10 minutes, 15 minutes. Then after that I
16 believe the Debtors will call David Glaspy to testify.

17 THE COURT: Okay.

18 MR. HARRIS: He's a lawyer witness.

19 THE COURT: Right. How about Henshaw, is he going
20 to testify?

21 MR. HARRIS: No, he's not going to testify today.

22 THE COURT: And somebody named Behrens?

23 MR. HARRIS: I don't believe he's going to testify
24 today either.

25 THE COURT: Okay. All right.

1 MR. CASSADA: So just in terms of housekeeping, I
2 know that we have to sort of break camp and get out of here
3 today. I don't know what Your Honor had in terms of timing
4 for stopping --

5 THE COURT: I was going to go till 5:30, which is
6 probably the latest we practically can go.

7 MR. CASSADA: So we can plan on going with court
8 time till 5:30 and then clearing out after that.

9 THE COURT: Clear out as much as you can and come
10 back in the morning to finish up. I thought we had tomorrow,
11 but turns out Judge Conrad is going to be in here tomorrow.

12 MR. GUY: We're not coming back tomorrow.

13 THE COURT: No, I know that. I thought you had
14 tomorrow to clean up or to get your stuff out of here.

15 MR. CASSADA: There's a second issue, and that is
16 from time to time we have planned on offering documents and
17 doing some housekeeping, and I think that's not going to be
18 possible, obviously, within this timeframe. We'll speak with
19 one another and coordinate how we'll do that.

20 THE COURT: All right.

21 MR. FINCH: One other housekeeping issue, Your
22 Honor. We have provided to Garlock the printouts of the
23 slides, PDF of printouts of the slides we used with our
24 Direct -- with our experts on Direct. At least for the
25 medical science witnesses, what we got from them was that, but

1 it was printed on six pages to a page and it's just too small
2 to read. So I would request that they give us the exact same
3 that we gave -- same thing that we gave them, which is for
4 every slide that's shown, it's not six pages to a page, it
5 sits on a full size page so you can see what it is you're
6 actually looking at, not little tiny boxes which you need a
7 magnifying glass to see, since that's effectively what they
8 presented to the Court was not the magnifying-size stuff but
9 the big stuff.

10 THE COURT: You got the Tyndall light.

11 MR. FINCH: I do have the Tyndall light, but the
12 Tyndall lighting is --

13 THE COURT: Just scatters everything.

14 MR. FINCH: That's right.

15 THE COURT: How about giving him a full page.

16 MR. HARRIS: We don't have a problem. I think they
17 can see everything. There's nothing that's illegible, but we
18 don't have a problem. We will offer those as a demonstrative.

19 THE COURT: Plus give them a copy.

20 MR. HARRIS: We'll do that, Your Honor.

21 THE COURT: All right. Let's just come back at
22 4:00.

23 (A brief recess was taken in the proceedings.)

24 MR. HARRIS: At this time we call Fred Boelter.

25 FREDERICK WILLIAM BOELTER,

Laura Andersen, RMR 704-350-7493

1 Being first duly sworn, was examined and testified as follows:

2 DIRECT EXAMINATION

3 BY MR. HARRIS:

4 Q. Please tell us your name.

5 A. Frederick William Boelter.

6 Q. Welcome back, Mr. Boelter.

7 I wanted to ask you -- I asked you to come back to
8 testify. Dr. Longo testified a couple of Mondays ago, and
9 testified to some things that I wanted you to address,
10 specifically with respect to Tyndall lighting.

11 But before we get into that, I just wanted to touch on
12 the thing you saw at the very end of the cross-examination of
13 Dr. Hesselink, and that is the 7-M chrysotile study that
14 Dr. Longo produced in rebuttal to Dr. Hesselink's report
15 earlier. You've taken a look at that; is that correct?

16 A. Yes, I have.

17 Q. And you discussed that at your deposition?

18 A. Yes.

19 Q. Can you tell us about 7-M chrysotile. Are you familiar
20 with that product?

21 A. Yes.

22 Q. Can you tell us something about how much of 7-M
23 chrysotile is actually asbestos and what the fiber size
24 distribution is?

25 A. 7-M is a grade of chrysotile which involves smaller

1 sizes. And the -- 100 percent 7-M is not 100 percent
2 asbestos. It is -- it will involve other minerals that are
3 part of the geologic formation from which the asbestos was
4 extracted. It would include silicates, it would include mica.
5 It might include other minerals as well as.

6 Q. There is a grading for 7-M for different types of
7 chrysotile; is that correct?

8 A. Yes.

9 Q. And 7-M is the name of one grade; is that right?

10 A. That's right.

11 Q. You produced a document at your deposition that discussed
12 the grading system for chrysotile; is that correct?

13 A. Yes.

14 Q. Is this the document?

15 A. It is.

16 Q. Can you tell us what is significant about this document?

17 A. What the grading process does is allows for different
18 mines to meet specifications for sizes. The longer size
19 fibers that would be of a lower grade, in numerically a lower
20 grade would be longer and thus would be used for weaving, for
21 example. Whereas the shorter fibers would be fillers and used
22 for other purposes.

23 Q. There's a chart in this document that talks about how the
24 different grades are graded. Can you tell us what this
25 information provides us or what this chart tells us?

1 A. Sure. Fundamentally the way the grading is conducted is,
2 the asbestos ore is crushed and then milled at the mine, and
3 then run through a series of -- basically three screened pans,
4 or screened layers, and then the fourth layer would be a pan.

5 So the grading process is one where the material is
6 passed over the screens. The smaller materials fall through
7 the larger screens. So the two-mesh is a larger opening than
8 a four-mesh is larger than a 10-mesh is larger than a pan.

9 So the larger fibers and larger particles will be
10 retained in the higher mesh. And so the way you read this
11 chart is, if you are looking for longer fibers or larger
12 elements, you would be looking to a group that has more
13 retained on the two-mesh, and less retained on the pan.

14 And so as you look down the page, for example, at the
15 7-M, it says that there is at least 1 percent or 1 ounce --
16 Q. One ounce out of 16 is that --

17 A. That's right. One ounce out of 16 that is retained on a
18 10 mesh, and a 10-mesh opening is about .053 inches of
19 opening.

20 Q. Is that what this chart indicates, this other chart
21 that's in there?

22 A. That's right.

23 Q. So 0.053 inches is about what size?

24 A. About 1.3 millimeters.

25 Q. So 1 ounce -- I'm sorry, 1 ounce of the 7-M chrysotile or

1 chrysotile that qualifies as 7-M is going to be at least 1.3
2 millimeters?

3 A. That's right, 1 out of 16 ounces, that's correct.

4 Q. And 1.3 millimeters is much, much larger than the
5 3 microns that we've been talking about earlier; is that
6 correct?

7 A. That's right. 1.3 millimeters would not be classifiable
8 as respirable. And it's also a -- the asbestos is a portion
9 of the 7-M, it's not 100 percent asbestos.

10 Q. Okay. And so Dr. Hesselink explained why we could see so
11 much dust of 7-M chrysotile under the Tyndall lights because
12 the concentration, but also some of these particles are real
13 large?

14 A. Sure. They're quite large. You can see them. You can
15 hold the materials in your hand. You can see the particles
16 and clearly they're much larger than a respirable size.

17 Q. You don't need Tyndall lighting to see the 1.3-millimeter
18 particles; is that correct?

19 A. No, you don't.

20 Q. Okay. So I wanted to talked to you about Tyndall
21 lighting. Dr. Longo presented his Tyndall lighting
22 demonstration from the Gasket Study IV. Are you familiar with
23 it?

24 A. I am, yes.

25 Q. I showed him one of his videos from the spiral wound

1 gasket study.

2 (Video playing.)

3 Q. And this video looked very similar to the Gasket Study IV
4 video. From an industrial hygiene point of view, can you
5 assess what the occupational exposure is to asbestos from
6 watching Tyndall lighting like this?

7 A. No. That's one of the challenges is, the information
8 visually that you obtain is not helpful. You ultimately have
9 to characterize analytically what's present in order to
10 understand exposure. Tyndall lighting really has no useful
11 application in industrial hygiene.

12 Q. So Dr. Longo testified the results from the spiral wound
13 study that had this video, was actually -- the results were
14 below the OSHA standard. What is the OSHA standard today?

15 A. It is 1/10th of a fiber per cc as averaged over eight
16 hours, or 1 fiber per cc as averaged over 30 minutes.

17 Q. Okay. And so .1 fibers per cc is an eight-hour time
18 weighted average is the OSHA PEL; is that correct?

19 A. Correct.

20 Q. I want to show you what the committee's expert
21 Mr. Beckett said.

22 (Video playing.)

23 (Video stopped.)

24 Q. So those exposures that we would see under the Tyndall
25 lights in the spiral wound video would not be significant?

1 A. That's correct.

2 Q. From an industrial hygiene point of view?

3 A. That's correct.

4 Q. Have you prepared a demonstration of Tyndall lighting as
5 part of your work in looking into these experiments by
6 Dr. Longo?

7 A. Yes, I have.

8 Q. What did you do?

9 A. What I did was, I took a number of common activities that
10 I would assume most people have done, such as pulling tissue
11 out of a box, or pouring breakfast cereal into a bowl, or
12 things like that, and subjected them to the Tyndall lighting
13 techniques and videotaped them.

14 Q. So what are we seeing here?

15 A. This is me opening a new box of tissue. And what I'm
16 going to be doing is pulling the tissue out of a box with
17 Tyndall lighting illumination. And what you see is a dramatic
18 effect associated with particulate that is in the air related
19 to an activity of pulling tissue out of a box.

20 Q. So very little particulate, but it's still detectable by
21 the Tyndall lights?

22 A. It's a dramatic look under Tyndall lights. If you're
23 asking me if I were to quantify it, would it have been
24 significant as an airborne concentration? I'm not sure what
25 you're asking.

1 Q. Well, it was a small amount of airborne particulate?

2 A. No. My assessment in looking at this screen, it was
3 quite significant. This is me pouring a box of breakfast
4 cereal into a pan. And at least on my screen there's quite a
5 bit of visual dust that is created in the process.

6 Q. Did you --

7 A. But I don't think most people would think of it as dusty
8 activity.

9 Q. But that's under the Tyndall lights?

10 A. That's correct.

11 Q. Then did you also do a demonstration with respect to the
12 activities that Dr. Longo was engaged in by using power
13 equipment on a flange?

14 A. Yes. What I did was, I took a brand new cast iron gate
15 valve. This is right from a supply house, and a new wire
16 wheel, radial wire wheel on the same tool that I used in my
17 Coltec studies, which is about a 1,250 RPM electric drill.
18 And what I'm doing is taking this wire wheel at that RPM, to
19 the face of a new valve. So it's a metal on metal contact.
20 And Dr. Longo had said if that were done, there would be
21 nothing visible under Tyndall light, and that's what I sought
22 to look at. So this is the effect under Tyndall light, and
23 there is quite a bit of dust being generated from the
24 activity.

25 Q. Do you know what that dust is?

1 A. I do not. It could be from the flange, it could be from
2 the wire wheel, it could be from other particulate. I don't
3 know what it is without quantifying it. That's under the
4 Tyndall light.

5 Q. We've also seen this video before. Do you have an
6 understanding of what this represents?

7 A. Yes. This is Dr. Longo on the left using a wire brush on
8 a flange surface, and on the right is -- I believe this is
9 John Spencer using a wire brush on a new flange -- new cast
10 iron flange surface. And again, there's visible dust that's
11 being generated by the process. You just don't know what it
12 is under Tyndall light, nor do you have any ability to
13 quantify it.

14 Q. And so he's doing -- you used the power wheel on the
15 flange face, he's using just a hand wire brush?

16 A. That is correct.

17 Q. Do you know what this dust is just by looking at this?

18 A. No, you wouldn't know visually what it is.

19 Q. So we discussed this briefly with Dr. Hesselink, and I
20 wanted to ask you about this. Dr. Longo's testimony in this
21 court was that if a product has 10 percent asbestos in it,
22 then it's his opinion 10 percent of the dust that's seen under
23 the Tyndall light would be approximately 10 percent. Have
24 your demonstrations or your look at this, does the work that
25 you've done support this type of conclusion?

1 A. No. I don't think there's any support for drawing this
2 conclusion, quite honestly, from either the work that
3 Dr. Longo did, or from the work that I've done or that other
4 people have done on the subject.

5 Q. What information do you have that would be useful for us
6 to understand that?

7 A. The collection of the air samples themselves that are
8 used to quantify what is in the breathing zone of someone who
9 is performing an activity.

10 (Video playing.)

11 Q. All right. There is another video that we have -- I
12 don't think we've seen this one before. This is from
13 Dr. Longo's Gasket Study IV.

14 A. Yes, this is --

15 Q. The first flange assembly; is that right?

16 A. This is the first flange assembly of the day, and the
17 first flange assembly of this particular sequence of tests
18 that are being performed.

19 What's significant here is, this is the disassembly of a
20 flange. There is clearly visual dust that is being generated,
21 it's falling onto the surface of the table. When the air
22 impact wrench is being used, you can see visually that there's
23 dust being blown around, but the Tyndall light is not on at
24 this point.

25 What's significant about this is, clearly there's dust

1 being generated. It is being dispersed. We don't have the
2 Tyndall light on. We can't make a visual assessment of its
3 significance.

4 And therefore when the Tyndall light is used later on, we
5 don't know how much of what we're looking at is related to the
6 activity of wrenches, or there's a pre-existing condition from
7 this dust, for example, coming off this disassembly at this
8 first step where that material could be paint, it could be
9 sandblasted material. You could see the dust falling. But
10 it's clearly not activity related to the gasket, and therefore
11 it's not gasket-related dust.

12 What he's going to be doing now is using a hammer to --
13 this is another angle of the same activity. And eventually
14 what will happen is that a hammer will be used to separate the
15 flanges. Here you can see it and you can see the dust being
16 kicked around. And there's no -- what we might call a
17 background Tyndall display to understand visually what that
18 looks like.

19 Q. Dust could be -- I mean, we don't know what is that dust;
20 is that correct?

21 A. We don't. I think there's a high degree of confidence
22 that it's not asbestos.

23 Q. Dr -- or Mr. Beckett, the committee's expert commented on
24 Tyndall lighting in his deposition. Do you recall that
25 testimony?

1 A. Yes, I do.

2 (Video playing.)

3 (Video stopped.)

4 Q. Do you agree with that, Dr. Boelter?

5 A. I do agree Tyndall light has no application in industrial
6 hygiene.

7 MR. HARRIS: Thank you. I pass the witness.

8 I should offer some exhibits.

9 Your Honor, we have marked as Exhibit GST 15528,
10 Mr. Boelter's CV. We offer that exhibit.

11 THE COURT: All right.

12 MR. HARRIS: We also offer the demonstrations in his
13 testimony today as GST 14740a, which is his demonstration.
14 And GST 15456a, which is the split-screen demonstration that
15 we saw.

16 MR. FROST: Your Honor, we have no objection to
17 those as long as they're offered for the same purposes that we
18 offered our videotape.

19 THE COURT: Okay. I will accept them as such.

20 (Debtors' Exhibits No. 15528, 14740a and 15456a were
21 received into evidence.)

22 MR. HARRIS: Then from his demonstration last week
23 or two weeks or so ago, he showed a video of his gasket
24 removal projects that he's worked on showing the difficulty in
25 removing the gaskets. We've marked that as GST 15527a and we

1 offer that for the same purposes.

2 MR. FROST: No objections.

3 THE COURT: All right.

4 MR. FROST: The same issues.

5 THE COURT: Submit all of that.

6 (Debtors' Exhibit No. 15527a was received into
7 evidence.)

8 MR. HARRIS: With that, Your Honor, we pass the
9 witness.

10 THE COURT: Okay.

11 CROSS-EXAMINATION

12 BY MR. FROST:

13 Q. Good afternoon, Mr. Boelter. How are you?

14 A. Good, thank you.

15 MR. FROST: Well, your afternoon's going to get a
16 lot better. I have no questions for you.

17 Your Honor, with that, the science team would like
18 to thank the Court and do the line shift to all the other
19 folks and thank the Court for its hospitality and thank the
20 court staff. And Your Honor, with that, may Mr. Finch and I
21 be released?

22 THE COURT: Yes.

23 MR. FROST: Thank you, Your Honor.

24 MR. FINCH: Thank you, Your Honor.

25 THE COURT: You're welcome.

1 You can step down. Thank you.

2 THE WITNESS: Thank you.

3 THE COURT: I was kind of liking the baseball
4 analogy better, because we even had a switch hitter in here
5 the other day.

6 MR. FINCH: Well, it's a relief pitcher, Your Honor,
7 Mariano Rivera coming in.

8 THE COURT: All right.

9 MR. SWETT: Good afternoon, Judge.

10 THE COURT: Howdy.

11 MR. KRISKO: Your Honor, the debtors will call David
12 Glaspy.

13 DAVID MICHAEL GLASPY,
14 Being first duly sworn, was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. KRISKO:

17 Q. Good afternoon, Mr. Glaspy. And welcome back to the
18 courtroom. You're one of the witnesses that has been seen by
19 this court before.

20 If you could please just state your name for the record.

21 A. David Michael Glaspy.

22 Q. Okay. Could you briefly describe for the Court why
23 Garlock has called you to testify at this point in the case?

24 A. My understanding is to cover three areas. One is to
25 offer my opinion regarding the exposure evidence it would have

1 had on Garlock's trial risk, settlement values, and defense
2 costs.

3 Second issue was to address a few things that were raised
4 last week by attorney David McClain.

5 And thirdly, my opinion about some changes in the law in
6 California and procedures that would have an effect upon
7 asbestos cases.

8 Q. Okay. Thank you. I know that the Court has heard
9 Mr. Glaspy's background before when he testified in March of
10 2011, but I think it would be useful for us to review that for
11 Your Honor.

12 First, Mr. Glaspy, where do you live?

13 A. Pleasanton, California.

14 Q. What do you do for work?

15 A. I'm an attorney. I've been a licensed attorney for 33
16 years, and I limit my practice to civil trials and primarily
17 almost exclusively of defending companies of people that get
18 sued.

19 Q. And before what courts are you admitted to practice and
20 in what jurisdiction?

21 A. I was admitted and licensed to practice in the State of
22 California since 1980. And I've been admitted to all the
23 districts -- federal court districts in the State of
24 California.

25 Q. What's your educational background?

1 A. Graduated 1977 from the University of Santa Clara with a
2 degree -- a Bachelor of Science degree in commerce business,
3 and three years later from University of Santa Clara with a
4 Juris Doctorate from the law school.

5 Q. All right. Can you describe in some more detail the
6 nature of your law firm?

7 A. Well, the firm named Glaspy and Glaspy, and originally
8 stood for my father and myself. He passed many years ago, and
9 currently two of my brothers and my sister are lawyers there
10 along with about 12, 13 other attorney.

11 Q. Okay. How long has asbestos litigation been a part of
12 your practice?

13 A. Well, since March of 1981 when I was -- had been a
14 licensed lawyer for all of three months. I received my first
15 five Garlock cases that were assigned to our firm by Aetna
16 Casualty and Surety Company. And since I was on the bottom
17 totem pole they came to me.

18 Q. Okay. Can you describe how your asbestos litigation
19 practice developed from there?

20 A. Well it picked up steam slowly, and eventually about
21 1984, about three, four years later, the powers that be,
22 parent company of Colt Industries took over the defense and
23 had some arrangement with the insurance carrier, and at that
24 time they came out and interviewed me, and I was appointed
25 co-national counsel along with Rick Goldfein out of

1 Philadelphia.

2 Q. As co-national counsel, what were your responsibilities?

3 A. My responsibilities were to oversee the litigation,
4 Garlock litigation in all the western states, and shortly
5 thereafter also included some of the southern states,
6 Mississippi, Alabama, Arkansas, what have you. It was our job
7 to oversee litigation, and to be in charge of settling all the
8 cases in all those states that we're in charge of. And if a
9 case was coming to trial, to direct the preparation and if
10 needed to go try the case.

11 Q. Okay. And that role began in 1984?

12 A. Correct.

13 Q. Okay. When did that role change, if it did?

14 A. Well, it changed in the -- about 1994, about 10 years
15 later, Garlock went to a regional system that is cutting the
16 country in quarters. I was still in charge of the west, but
17 no longer was I in charge of Texas or the southeast, so it was
18 just the west.

19 Q. Was it basically the same role just with a different area
20 of responsibility?

21 A. That is correct, just a smaller region.

22 Q. Okay. As national counsel or as regional counsel,
23 however your role was described, did you ever have any input
24 into the development of Garlock's strategy?

25 A. It was -- I participated in that constantly every year

1 from 1984 through 2010.

2 Q. Okay. What in terms of your supervisory
3 responsibilities, you've touched on those a little bit. Can
4 you add any detail in terms of your responsibilities for
5 trials and settlements?

6 A. Well again, some states had very little litigation some
7 had a lot. If in fact cases were coming up for trial, it was
8 my job to contact the plaintiff's attorney, to open up
9 negotiations, and to get the cases settled. If we couldn't
10 get the cases settled for what we felt was a fair number, then
11 it was my job to prepare the case for trial and to go try the
12 case.

13 Q. Okay. Now you, during your time you were involved in
14 trials directly; is that correct?

15 A. Hundreds of trials.

16 Q. Okay. Can you describe your trial experience for the
17 Court?

18 A. Again, lots of trials would start, especially back in the
19 '80s and all through the 30 years I did this, you show up and
20 plaintiff's counsel would accept the offer that was on the
21 table. So you basically show up, set up your show, get ready
22 to try the case, they see you're serious, they take your money
23 and go back home. That happened hundreds of times.

24 If we got there and they didn't accept the offer that was
25 on the table, then we had to try it, and I personally tried 33

1 cases to verdict.

2 Q. So 33 for Garlock alone?

3 A. That's correct. I've tried cases for other defendants,
4 yes.

5 Q. How many total would you say, cases you tried to verdict?

6 A. It's -- well, it gets in the range of 65 to 70.

7 Q. Okay. And I should mention, you prepared some slides to
8 assist the Court in understanding your testimony today; is
9 that correct?

10 A. Yes.

11 Q. Okay. Can you add some more detail in terms of
12 describing to the Court your experience in settling cases in
13 terms of the numbers of cases that you've overseen the
14 settlement of, et cetera?

15 A. Well, I don't know the exact number, but I know it's well
16 over 25,000. The reason I know that because those are just
17 cases that were in California that ended up being resolved
18 over the years. Early on there were obviously hundreds and
19 thousands of settlements in groups. The number added up
20 pretty fast. But it's somewhere between 25,000 and 50,000.

21 Q. In the course of settling those cases, did you provide
22 advice and opinions to your client?

23 A. It was my job to evaluate the case, and give my client
24 the best recommendation I could as to the settlement value of
25 that case versus having to try it.

1 Q. Okay. Do you have other asbestos clients besides
2 Garlock?

3 A. Yeah. And very, many -- actually, and it's changed over
4 the years, and they come and go, obviously. But currently
5 it's about 35.

6 Q. Without naming any clients, can you describe for the
7 Court generally the kinds of asbestos defendants that you
8 represent?

9 A. Primary were like Garlock manufacturers. You have
10 suppliers of products, all the way down to wholesalers to
11 retail stores are sued for having supplied a product. There
12 are premises folks, contractors, California there's at least
13 five different home builders that are sued in asbestos
14 litigation regularly for just building homes. It's pretty
15 much anybody can get sued -- any company can sue for asbestos,
16 I've represented, not everyone, but I'm talking about every
17 different category.

18 Q. Every different kind of defendant, manufacturer, premises
19 owner, equipment manufacturer.

20 A. Contractors.

21 Q. Contractors?

22 A. Yes.

23 Q. How would you describe your practice generally, both in
24 terms of the asbestos work and the other aspects of your legal
25 practice today?

1 A. Today it's probably about 40 percent of what I do.

2 Q. Today asbestos litigation is 40 percent?

3 A. That's correct. It used to be about 60 to 70 percent
4 when Garlock was still in the arena.

5 Q. Okay. So even after Garlock's bankruptcy, you've
6 continued to -- have you continued to practice in the asbestos
7 litigation area?

8 A. I have. And when that -- obviously when I became
9 available, some other defendants decided they might want to
10 use my abilities, so we added a few.

11 Q. Okay. Are you familiar with the substantive and
12 procedural laws that impact asbestos claims?

13 A. I am, and I have to stay on top of that on a monthly
14 basis.

15 Q. So you continue to monitor those laws, those procedures,
16 the administration, et cetera, in the context of your
17 practice?

18 A. Very closely.

19 MR. KRISKO: Your Honor, we would tender Mr. Glaspy
20 as an expert in the assessment and evaluation of asbestos
21 claims, in assessing trial risk, the impact of evidence on
22 trial risk, and costs, and settlement values, and evaluating
23 the extent to which laws and procedures would impact defense
24 of asbestos claims.

25 MR. SWETT: Your Honor, we will reserve our

1 objections to his purported expertise until the time of
2 post-trial briefs.

3 THE COURT: Okay. Accept him as such. Proceed.

4 MR. KRISKO: Thank you, Your Honor.

5 Q. Mr. Glaspy, could you give the Court an overview of the
6 opinions you intend to offer here today?

7 A. Yeah, sort of a repeat of what I already said. But the
8 primary opinion is about the exposure evidence that I have the
9 ability to review regarding some specific cases, and what the
10 effect that would have had on Garlock's defense costs, trial
11 risk and settlement values.

12 Q. Okay.

13 A. And then the other issue again, as we talked about, is
14 the changes since the filing in 2010 that takes place in
15 California that affected the asbestos litigation.

16 MR. KRISKO: Thank you. Your Honor, the nature of
17 Mr. Glaspy's testimony is going to touch on some cases that
18 have been designated as confidential. We would ask that as we
19 go into this testimony, that the courtroom be cleared of all
20 persons who are not subject to the confidentiality orders of
21 this Court.

22 THE COURT: Are you ready to do that now, or do you
23 have something you can do before we have to do that?

24 MR. KRISKO: I can proceed for a couple minutes. It
25 does become integrated at that point, Your Honor --

1 THE COURT: You just tell me. Let's go as long as
2 we can without having to --

3 MR. KRISKO: Very well.

4 Q. Mr. Glaspy can you -- do you have an opinion about
5 whether disclosure of exposure to asbestos products would have
6 impacted Garlock's defense costs, trial risks or settlement
7 values?

8 A. Yes, I do.

9 Q. What is that opinion?

10 A. My opinion is, after having reviewed those materials,
11 that if that information had been available to me as the trial
12 attorney representing Garlock in those cases, it would have
13 greatly reduced the trial risk, the settlement values and the
14 costs. And my opinion is, it would have reduced it back to
15 where it was before the bankruptcy wave in the 1990s, those
16 values.

17 Q. Okay. Without naming any specific cases, can you
18 describe for the Court the nature of the materials that you
19 reviewed?

20 A. Yes. I reviewed materials from several law firms,
21 including their written discovery responses, trust claim
22 forms, ballots, and those 2019 forms.

23 Q. Okay. In talking about your opinion, can you describe
24 for the Court the basis for your conclusion? You've
25 identified several items here in your slides, if you could

1 detail --

2 MR. SWETT: Your Honor, I have an objection. I
3 don't believe this expert included in his report anything
4 concerning 2019 statements.

5 MR. KRISKO: Your Honor, he's not going to be
6 offering opinion on 2019 statements. He just reviewed those
7 in the context of developing his opinion.

8 MR. SWETT: Thank you.

9 BY MR. KRISKO:

10 Q. Please proceed, Mr. Glaspy.

11 A. As I testified in 2011 in this case, over my 30 years of
12 defending Garlock and other asbestos defendants, it is -- it
13 became obvious to me it was imperative that you had to tell
14 the jury up front right away what was the cause of that
15 plaintiff's mesothelioma.

16 And the reason I say that, jurors are human beings, even
17 in Los Angeles, and they want to know, they need to know why
18 that person's dying. They have this question in their head.
19 Once you address that issue, once you give them the basis for
20 what's caused the disease, then they are much more receptive
21 to listen to the evidence about other products and what have
22 you. So that's -- that's just the most crucial point.

23 So what happens, and sitting here a couple days the last
24 few weeks listening to the people testify, there's been
25 reference to the chrysotile defense, in reference to the

1 low-dose defense. Those are just labels, and they really --
2 there's nothing you can pull off the shelf and say here's this
3 defense. It's much more intertwined and a bit more
4 complicated than that.

5 Every case that I tried for Garlock, the first issue as I
6 said, is to show the exposure to the amphibole-containing
7 insulation product as the undisputed cause of disease. It's
8 undisputed. Plaintiff's experts will give that to you.

9 So -- and to do that, the first thing I would do is point
10 to the sheer volume. I'm sure you've seen photographs of
11 insulation on pipes compared to hold up a gasket. You also
12 have the testimony from your experts about tons of insulation
13 on board ships, in the shipyard and refineries and power
14 houses, versus a few pounds of gaskets. So sheer volume is
15 the first, basically three pillars. That's the first issue
16 you address.

17 Then you talk about the releasability, as I call it. I
18 think that's been referred to here as the low-dose defense.
19 But what you're showing is, that that volume of insulation is
20 giving off thousands of fibers per cc. And again to use the
21 plaintiff's own experts, people like Longo who admit that the
22 Harries' articles, talking about thousands of fibers per cc,
23 is an authoritative article and a very well done study.

24 And you come in and you are talking about .00 something
25 for gaskets. The orders of magnitude, it's millions of

1 difference. So you have more volume, and you have a lot more
2 coming from it.

3 And then the third prong has been referred to here, I
4 think, as the chrysotile defense. Now it's a misnomer in my
5 mind because you're not -- you don't need to prove to anybody
6 that chrysotile can cause meso. And I never set out to do
7 that with a jury, because it's a very complicated issue, as
8 I'm sure the Court has found out here.

9 But the plaintiffs' experts will always admit that
10 chrysotile is 100 times, or 200 times less toxic than the
11 amphiboles.

12 So you do the math on this, you take the board, there's
13 about 2,000 pounds per ton. So you got 10,000 to 1 fiber per
14 cc, or 1 fiber per gasket. Multiply that by 10,000 times more
15 fibers released. And again by 200 times more toxic. And it's
16 billions and trillions to one. It just puts it in the context
17 that there's no way that that gasket could be the substantial
18 factor in having caused the plaintiff's disease.

19 Q. So is it fair for us to say based on your description,
20 that you see Garlock's defense more broadly and wouldn't
21 characterize it as -- in separate ways?

22 A. No. You can't cookie cutter it like that and pull it off
23 the shelf. It's everything. And obviously if you look at
24 that -- those three pillars, if you take away the amphibole
25 insulation product, you're left with virtually nothing as a

1 defense.

2 Q. Okay. We've heard some testimony about a term that I
3 think you used in a deposition called "the idiopathic
4 defense". Can you explain to the Court what you might have
5 been talking about there?

6 A. As again, that's another misnomer. Idiopathic is a
7 medical term and I don't profess to be a medical expert. But
8 us lawyers on the defense side have referred to this alleged
9 defense as "the idiopathic defense". And that is, if your
10 client sued and you haven't developed evidence about other
11 exposures, you basically have to tell the jury that it wasn't
12 your product, it just happened because.

13 That's what the jurors don't want to hear. They don't
14 want to -- they just don't want to know -- subconsciously
15 they're thinking, this could happen to me. I live my life, I
16 don't smoke, I don't drink, and I can still get cancer. It's
17 very unsettling. It's not really a defense. That's why I
18 think it's a misnomer. If that is the defense, then you're
19 really walking in with no defense.

20 Q. When you use that term in your deposition, did you intend
21 to make any comment on epidemiological studies or models that
22 other experts may have been looking toward?

23 A. Absolutely not. I was just referring to a phrase I've
24 heard from other defense attorneys.

25 Q. Okay. You identify Garlock's trial record as part of the

1 basis for your opinion. Can you explain why you've done that?

2 A. Yes. I explained the defense that I've been using or had
3 used for 30 years, I still use it for other clients. And up
4 until about oh, late '90s, I believe it was 19 to 1. It was
5 fairly successful.

6 Q. What other aspects that led you to your conclusion you
7 talk about -- could you review those with the Court?

8 A. Well, I'm sure you've heard about the bankruptcy wave. I
9 know I sat here and listened to some of that. That was
10 certainly a time when things changed in my world, in the trial
11 world on the ground, in a place like California, Los Angeles.
12 The companies were gone, they'd gone into bankruptcy,
13 insulation companies. But we didn't see at first, the
14 identification going away. But with time it began to happen.
15 And it did not happen with every firm. There were some firms
16 still disclosed everything, and some firms quite frankly
17 disclosed absolutely nothing. But it took time. It didn't
18 just happen the next day, it was -- it developed over a few
19 years.

20 Q. The firms that you say were the ones that did not
21 identify everything or things, what characteristics did they
22 have?

23 A. Well, I don't know how to say without getting into maybe,
24 stuff -- I don't want to step on any toes or evidence, but
25 those firms -- you didn't see the disclosure of any asbestos

1 insulation products in things like answers to interrogatories.
2 In depositions, the plaintiffs could no longer remember names
3 or products, they remember seeing it. If they did, they
4 claimed they saw a little bit of it. It was minimized.

5 Again, it's not a black and white line. There are firms
6 I would say played it the same and still do today, and there's
7 firms that gave you nothing and there were firms in between.

8 Q. Okay. Now I understand, Mr. Glaspy, that you identified
9 some examples that illustrate that point.

10 A. Yes, I did.

11 MR. KRISKO: Okay. Your Honor, at this point we
12 would need to close the courtroom.

13 THE COURT: Okay. I'll have to ask anybody that
14 hadn't signed a confidentiality agreement to leave. We'll
15 open back up when we can, which I guess won't be today.
16 (The courtroom is now closed for the confidential portion of
17 the hearing.)

18 THE COURT: I believe everybody's left.

19 BY MR. KRISKO:

20 Q. All right. Mr. Glaspy, can you explain this slide for
21 the Court and how it's important to your opinion?

22 A. Okay. I picked the two cases involving fairly similar
23 clients. The Lunsford case was in San Francisco, filed by the
24 Brayton office. And I testified previously that that's one of
25 the firms that continued to identify, in their Answers to

1 Interrogatories and in deposition, the exposures to
2 insulation.

3 On the right-hand side is the Ornstein case, which was a
4 Simon, Eddins, Greenstone. Which is now Simon, Greenstone
5 something else. But that firm -- it was a Los Angeles case,
6 and it was one of the cases in which I reviewed the claim
7 forms, the discovery responses, what have you, in January of
8 this year. And I picked these two cases because it shows
9 distinction.

10 The Lunsford case actually tried to defense verdict in
11 2002. It was after the bankruptcy wave, but again we had in
12 that case -- let me explain a little bit about it.

13 The plaintiff himself was a 49-year-old living meso with
14 a wife and two young daughters. He was a vice president of
15 Boy Scouts of America, just a great guy. His only exposure he
16 could talk about was, he was in the Navy. He was in the
17 storeroom, and from time to time they'd hand out a precut
18 gasket and he remembered the name Garlock and he would hand it
19 to somebody.

20 We were at that time in that case there was -- Garlock at
21 the time of trial was in it, as well as a brake manufacturer,
22 because he said he changed a couple brakes in his driveway
23 when he was a young kid. That was one of the first times I
24 heard reference to the -- as we just mentioned idiopathic
25 defense. That was going to be their defense.

1 I disagreed, and I went a different route. We took the
2 interrogatories, used identification of Johns-Manville, Owens
3 Corning, Pittsburgh Corning.

4 Now the plaintiff would testify and did, he didn't
5 personally use those products. But once we had those
6 products, and had him identify those products, he used them
7 with his experts, and his experts admitted on board ship he
8 would have been exposed, confined spaces, he was in the
9 storeroom, and we won. We didn't have as a big numbers, but
10 he had big numbers to talk about, put on the three-pillar
11 defense I just mentioned, and we won the case. And he had a
12 \$3 million wage loss case. If we lost that case at 1 percent
13 it would have been a tremendous verdict. So it was -- as I
14 say, it was a good win for us.

15 Flip side of that, fast forward to 2008, and you have
16 Ornstein in LA, similar occupation, a electrician in the Navy
17 on board a ship.

18 Q. So just to pause right there, Mr. Glaspy, now you're
19 describing the case that's reported on the right side of the
20 screen?

21 A. That's correct. The Ornstein case, Simon, Eddins. In
22 his Answers to Interrogatories -- in the Los Angeles
23 interrogatories, they asked for products that you worked with
24 from named defendants, or exposed to from named defendants.
25 Products you were exposed to for non-named defendants. And

1 then a catchall question for any other products. There was
2 not one mention of any of the bankrupt companies' products in
3 any of those interrogatories.

4 Q. How was that case resolved?

5 A. Well, we were -- this is post-Treggett. The Court's
6 heard enough about Treggett. The same firm, same
7 jurisdiction. And again, not having any evidence of
8 insulation exposures, I was forced to recommend to my client,
9 they settled the case for \$450,000.

10 Q. Okay. Now you identified some of Mr. Ornstein's
11 interrogatories. Is that what you have here?

12 A. That's correct.

13 Q. Can you walk the Court through those and explain how they
14 informed your opinion?

15 A. Yeah. This is the second. I said there were three -- a
16 series of three. This is the second in the series,
17 Interrogatory No. 27. And they're asking about asbestos
18 manufactured by an entity not named as a defendant. The first
19 one was asking for named defendants' products. Now it's for
20 everybody else's. And his answer is, "upon information and
21 belief" -- I'm not sure what that all means, but the answer is
22 "No".

23 Q. So before we go on to the next slide, so is this
24 interrogatory specifically asking about bankrupt companies'
25 products?

1 A. Everybody's bankrupts and everybody else they didn't
2 name. The other interrogatory just asked for named
3 defendants' products.

4 Q. So any entity that's not a defendant in the case?

5 A. That's correct.

6 Q. Would that include bankrupt companies?

7 A. It does.

8 Q. Okay. All right. Let's go on to the next one.

9 What about this part of the interrogatory responses?

10 A. This is the third in the series, and says, you haven't
11 identified any in 26 and 27, if you know of any other possible
12 products that are out there that might have been a problem,
13 tell us about them. And this one's, "not applicable". That
14 was his response.

15 Q. Okay. So this portion of the interrogatories, would you
16 describe it as a catch-all to try to obtain information from a
17 plaintiff?

18 A. Yes. If -- lawyers tend to play semantic games, and if
19 they're saying well, he's not a defendant, but he's really not
20 a non-named defendant, then it's got to be something else.
21 This is the catchall. They're going to try to get every
22 product that this person was exposed to, we need that
23 information. And I guess "not applicable" means that it's
24 "no". I can't think of anything else that means.

25 Q. Now the Court has heard about standard interrogatories

1 that some courts have established. Are these ones that would
2 fall into that category?

3 A. They are. These are Los Angeles general order standard
4 plaintiff's interrogatories fought over years ago.

5 Q. Okay. Now I understand that you do not have with you the
6 interrogatory responses in the Lunsford case from the Brayton
7 firm, but you brought with you an example of the kinds of
8 responses that that firm gives?

9 A. Yes. As I said in deposition --

10 MR. SWETT: Has this been produced?

11 MR. KRISKO: It has not.

12 MR. SWETT: I object, Your Honor, this document has
13 not been produced. This is not cross-examination.

14 THE COURT: I'll sustain the objection.

15 MR. KRISKO: All right.

16 Q. Can you describe in general terms the kinds of responses
17 that you saw from the Brayton firm that represented the
18 plaintiff in the Lunsford case?

19 A. Yes. As I testified at my deposition, I noticed over the
20 years, the Brayton office from when it first started through
21 the present, did not change at all the way they answered
22 interrogatories. They fully disclosed all the insulation
23 companies -- any companies that had any involvement in the
24 case were disclosed, and whether or not they were in
25 bankruptcy, and that never changed. And to this day it is the

1 same.

2 Q. Okay. Now, did that -- can you give an example to the
3 Court of the kinds of companies' products that you would
4 typically find in those disclosures?

5 A. Depending upon the occupation of the plaintiff, it was in
6 the Navy, you would see Pittsburgh Corning, Owens Corning,
7 Fibreboard, Eagle-Picher Cement, all those types of products
8 are disclosed in their discovery responses.

9 Q. Going back to that comparison slide, can you detail for
10 the Court the companies Mr. Lunsford identified in that case?

11 MR. SWETT: Objection; hearsay.

12 THE COURT: Overruled.

13 THE WITNESS: I was there, and I tried the case, and
14 I argued to the jury that products he identified and included
15 Johns-Manville, Owens Corning, Pittsburgh Corning,
16 Eagle-Picher, Fibreboard and Western MacArthur, because
17 they're a big distributor of JM in California.

18 BY MR. KRISKO:

19 Q. Let's go on. Now, can you explain Mr. Glaspy what this
20 slide depicts for the Court?

21 A. Well, this slide depicts not all, but some of the trials,
22 beginning with the Big Pond case in 1988, through the Lunsford
23 case we were just discussing in 2002. This is sort of all the
24 pre-bankruptcy wave and representative of what was happening
25 in the '80s, '90s and into the 2000s.

1 Q. Okay. I think you described your trial record for the
2 Court before, but could you, I guess, tell us what -- at least
3 before the bankruptcy wave -- your trial experience was and
4 specifically your win/loss record?

5 A. Well, up until the Silvera case in 1998, it was 19 to 1.
6 Two percent to my client wasn't a loss. I took it as a loss.
7 Two percent of \$1 million verdict was about 20 Grand.

8 Q. Did these cases and other cases that were part of
9 Garlock's verdict history include the so-called "empty chair
10 cases"?

11 A. Yes, from the top to the bottom, the Big Pond case was
12 just Garlock, at that point. You heard about Wellington and
13 the Asbestos Claims Facility, they were the main defendant.
14 They settled out and plaintiff went after just Garlock at
15 trial. So we were by ourselves.

16 The Silvera case, 1998, it was a Navy case. And it was
17 just Garlock by ourselves. We did have the ability to point
18 at the insulation products and we ended up with 2 percent. So
19 when you lose a case like that with all other product out
20 there, your percentage is in the 1, 2, 3 percent range.

21 And then the last one being Lunsford, again, as I
22 explained, it was just a storekeeper. He didn't sue anybody
23 other than a brake manufacturer and Garlock.

24 Q. Okay. Is there any -- did you approach empty chair cases
25 in any way that was different than the other cases that

1 Garlock faced?

2 A. No, they were identical. We did the same defense, always
3 put on the same way. You just didn't have -- it was actually
4 easier, because there's no insulation defendant trying to
5 defend themselves. You get the point of the empty chair, it's
6 an easier case to put on.

7 Q. Okay. We already talked about the Lunsford case. We
8 heard a little about the Warde case in testimony from
9 Mr. Hanly who is national counsel for Flexitallic. Can you
10 describe the circumstances of that case?

11 A. Same as all the other cases. The exposure was a shipyard
12 up in Seattle. I remember that Flexitallic was in the case.
13 I remember that because we had the -- I remember we just saw
14 some of the Longo videotape, that's the first time that was --
15 the videotape wasn't used, I don't think -- but the study was.
16 And his mistake which brought the number down to below the
17 exposure limit which is -- came out at that trial -- not
18 surprisingly that the jury defense everybody and ended up
19 hitting the local insulation supplier for about \$400,000.

20 Q. Okay. But Garlock received a defense verdict in that
21 case?

22 A. As did Flexitallic, and as did one other encapsulated
23 product defendant which I can't recall at this time.

24 Q. Okay. Speaking of Dr. Longo, some witnesses have
25 identified his role in asbestos litigation as somehow altering

1 the defendant's cases. Do you agree with that?

2 A. I do not. From day one we've had to deal with plaintiffs
3 and industrial hygienists, and they have 20 or 25 at their
4 disposal they use interchangeably. Longo was one of many.
5 And we've done that since the mid-'80s to the present. Same
6 with -- and they have a doctor testify those numbers caused
7 disease. Your product caused disease. We have our doctors.
8 That hasn't changed.

9 What did change for a year or two period of time was the
10 videotapes. And we had to develop evidence and spend a little
11 money and time developing a rebuttal to videotapes. They're
12 very effective, especially in a place like Los Angeles for
13 folks who are used to watching movies and TV. It's a very
14 effective medium that quite frankly needed to be addressed.

15 Q. Did Garlock address those tapes?

16 A. Yes, in a number of ways. In San Francisco a person
17 brought motions to exclude them. And the presiding judge
18 there excluded them after the 1998, sometime after that, '99,
19 2000 -- and referred to them in her opinion as gloom and doom.
20 She found them very prejudicial and have no scientific value.
21 And after that most of the judges in San Francisco followed
22 her ruling and ruled the same way.

23 Most recently there was a *Daubert* hearing, I think we
24 heard a little bit about that today in Oakland, Dr. Hesselink
25 was there, and the same thing happened, the videos were

1 excluded. I think in my trials I faced the videotape once or
2 twice.

3 Q. Okay. And was Garlock successful in getting the
4 videotape excluded in other cases?

5 A. Yes. Around the country there were all sorts of
6 hearings. And Texas had some -- there were a lot of rulings
7 about junk science and what have you. But it was a fight that
8 had to be fought, but it didn't change the trial dynamic, at
9 least in my experience.

10 Q. Okay. We heard from Mr. McClain of the Kazan McClain
11 firm last week. Were you here for that testimony, Mr. Glaspy?

12 A. I was. I sat through both the Direct and the Cross.

13 Q. Okay. One of the things that he seemed to touch on, and
14 I'm not going to quote him directly, was -- well, let me back
15 up.

16 Did you deal with the Kazan McClain firm on behalf of
17 Garlock?

18 A. As I indicated at the beginning of my testimony today, my
19 first five cases were with Steve Kazan when he was sole
20 practitioner in 1981. So I dealt with him the first few
21 years. And as his firm grew, David McClain became the
22 negotiator. He and I dealt with cases from then until --
23 well, I still dealt with Dave for other clients, but up to
24 2010 I dealt exclusively with David McClain to settle the
25 Kazan case.

1 Q. Can you describe for the Court how Garlock and that firm
2 resolved and tried cases?

3 A. Well, early on in the '80s there were a lot of big
4 players, and we were obviously a smaller player. And
5 Wellington came along, they had settlement conferences. What
6 basically happened is, I got thrown out because Garlock wasn't
7 playing with the Wellington group.

8 So I would sit in the room with Steve Kazan, while the
9 other defense attorneys all sat in the other room and got to
10 know him very well, and we developed an understanding, and we
11 resolved cases rather quickly.

12 And that's how it went till David McClain -- eventually
13 it got to the point where -- again, this is a firm that filed
14 very high-value cases, but very few cases. And so what would
15 happen is, about the mid-'90s, early '90s, Dave and I began to
16 say, well, why don't we just do these in groups when you want
17 to get around to it. And pretty much the cases would come and
18 go to trial, we would tell the Court they're settled, and a
19 couple years later we would sit down and settle a group of 20
20 or 30 cases.

21 Q. So would you -- in any particular year, you might settle
22 some cases, but you may not settle others, those might not be
23 resolved?

24 A. Two or three years go by and we wouldn't even talk about
25 settlement. We would just tell the Court that Garlock

1 settled, they tried the case or settled the case and go off
2 the court's docket.

3 Q. Okay. Well, speaking of trial cases, what was your trial
4 experience with the Kazan firm?

5 A. Well, it was 9 and 0. The last two on the list here it's
6 on the chart, we were dismissed at closing argument.

7 Q. Okay. When Mr. McClain was here, he suggested that the
8 explanation for Garlock's trial record was due to the fact
9 that his firm did not make -- I'm paraphrasing here -- a full
10 presentation against Garlock as a defendant.

11 MR. SWETT: Objection. His testimony is available
12 rather than paraphrasing it if you want to tell him what he
13 said.

14 BY MR. KRISKO:

15 Q. Do you recall Mr. McClain's testimony on -- in trying to
16 explain Garlock's trial record against his firm?

17 A. I did. I listened to all of his testimony.

18 Q. Okay. Did you agree with his explanation as to why
19 Garlock was uniformly successful against his firm?

20 A. I did not. There were times during cases -- pretty much
21 in all these cases they called industrial hygienists, several
22 of them were Longo, Templin, he testified here, he was called
23 against us. They put them on, they put on the case, and then
24 as the case winds down they start deciding who they're going
25 to focus on and what they're going to do.

1 And yeah, there were times in some of these cases, the
2 early -- I say the first six on this list -- I'm sure at least
3 in one or two of those he came to me and said, well why don't
4 you pay me X, Y, or Z and you can go home.

5 And my position always was with plaintiffs' attorneys
6 around the country was, we offered a fair number, if they
7 didn't take it, we were going to try the case. It doesn't do
8 good to go down there, spend all your money trying it and then
9 turn around and spend the same amount of money. It's a
10 lose/lose.

11 So he may have in his own mind decided to let us go, but
12 we were there at verdict. He put on his experts, we put on
13 our expert witnesses. I don't call that taking it easy on
14 somebody.

15 Q. Mr. McClain also suggested that his firm kept Garlock in
16 cases to avoid the removal of the case to federal court. Do
17 you have a reaction to that?

18 A. I do. In San Francisco in the mid-'80s, there was a case
19 called Epi Burgess (phonetic) that was a meso case going to
20 trial, and one of the co-defendants removed it to federal
21 court. I was there for Garlock and agreed, as each defendant
22 has to agree. Went in front of Judge Pechman back then, and
23 he basically ordered us -- well, told us, to make sure our
24 case (indiscernible) got sent to the defense bar. That if
25 anybody did it again, he might consider sanctions, and he

1 referred the case -- remanded the case back to state court and
2 it delayed the trial for all of two days.

3 Thereafter, the same thing happened in Oakland, I was not
4 involved in that trial, but Judge Sandra Armstrong on the
5 federal bench in Oakland, likewise remanded it back. And it
6 got to the point where if somebody removed the case, it came
7 back the next day without any paperwork being filed.

8 Q. Okay. So was it a practice of defendants to remove cases
9 to federal court and northern California?

10 A. No, that ended a long time ago. The reason they did it
11 in other jurisdictions, was to get the case sent to the MDL,
12 which was in Philadelphia, and became a graveyard of cases.
13 You would spend 10 years in that jurisdiction.

14 So if the federal judge let the case go to MDL, stay in
15 the federal court system, it would have been a win for the
16 defense. That's not how it worked out in northern California.

17 Q. So do you disagree with Mr. McClain's statements that
18 leaving Garlock locked in the case was necessary to avoid
19 removal?

20 A. It was not necessary, and in many of these cases they
21 also had a local defendant, contractor Thorpe that was a local
22 defendant that would stay in the case and be sitting there at
23 time of trial. It was not diversity, so it could not be
24 moved.

25 Q. Okay. Let's talk about one of the cases that Mr. McClain

1 addressed, the Plooy case, which is there at the bottom of the
2 list. He characterized that case, and I'm quoting from page
3 3494 of the transcript as a case about a Johns-Manville plant
4 worker. And he says "I kept them" referring to Garlock "in
5 that case because they also would not consent to removal".

6 Do you agree with that statement about the Plooy case
7 from Mr. McClain?

8 A. I do not. As you can see, the co-defendant with us at
9 trial was JT Thorpe and Son, Inc., they were a local
10 distributor. They were a California entity. The case could
11 not be removed.

12 Q. Okay. And you brought some documents relevant to the
13 Plooy case?

14 A. I did. What this is, is a joint witness list. Each side
15 has to present their witnesses and time estimates for direct,
16 and then you file your witness list and respond to your time
17 estimate for cross and what have you. Yes, I brought -- this
18 is from the case itself. And if you -- let me see here. Up
19 on the top is the disclosure of William Longo, an industrial
20 hygienist, who testified regarding Garlock. I don't call that
21 taking it easy on Garlock. If it is, it's news to me.

22 Q. So is it your testimony that based on this disclosure of
23 witnesses, Mr. McClain's firm intended to call Dr. Longo
24 specifically to testify about Garlock?

25 A. In Advocate Mines and JT Thorpe, not Metropolitan Life,

1 who was the -- as he said, their target defendant.

2 Q. Were there other witnesses directed to Garlock testimony?

3 A. Yes, if you go to the next page there is reference to
4 John Templin and he is an industrial hygienist who works for
5 Longo. And he was disclosed to testify solely about Garlock's
6 exposure.

7 Q. Okay. And again, just so it's clear for the Court, were
8 there other defendants named in the case that were domestic to
9 California?

10 A. JT Thorpe and Son.

11 Q. Would that have avoided removal?

12 A. Absolutely, there's no diversity.

13 Q. Mr. McClain also talked about the Smith case which was
14 another case, that was a 2009 case. Do you remember his
15 discussion of that case?

16 A. I do. It was a case tried in Los Angeles. It was the
17 only Kazan case that we tried in Los Angeles. Almost all
18 their cases are in Oakland.

19 Q. Okay. He likewise described that case and said that it
20 was "a case really that Garlock had insignificant, if any,
21 exposure compared to what his real exposures were". Do you
22 remember that testimony?

23 A. I do.

24 Q. How would you describe Mr. McClain's firm's position at
25 trial in that case?

1 A. Again, it was not how it was presented. But the exposure
2 was the plaintiff was a mechanic.

3 MR. SWETT: Sorry. I can't hear you, sir. Can you
4 speak up?

5 THE WITNESS: The plaintiff was a mechanic. And his
6 exposure -- the claimed exposure was to auto brakes and auto
7 gaskets. That was the extent of his exposure.

8 BY MR. KRISKO:

9 Q. Okay. Now did the McClain firm press the case against
10 Garlock at trial?

11 A. It did.

12 Q. Okay. And you brought some documents from that case?

13 A. Yes.

14 Q. That's relevant to that description?

15 A. In Los Angeles, most courts you have to file your exhibit
16 list. And what I have here is an exhibit list from that case.
17 And if you turn to -- I forget the page, 31. Starting at
18 Exhibit 450, they refer to Garlock discovery responses,
19 several different ones.

20 Then they get into the buyer's directory. There's a
21 reference to that and Victor Sealing. And the reason Victor
22 and Dana are all there, is because Dana was a parent company
23 to Victor, which was a brand name of automobile gaskets
24 packaged and sold for automobiles. And the claim is that they
25 brought their gasket product from Garlock. And under

1 California law, Garlock is just as liable for Dana or Victor
2 for selling that gasket. Then of course they list the Garlock
3 MDS sheets which I'm sure you heard about.

4 Q. Was this a case where Garlock was retained in the case to
5 avoid removal to federal court?

6 A. It was not. In this case there was a local defendant, a
7 local auto parts supplier, a California company, no diversity.

8 Q. That defendant avoided diversity?

9 A. Yes.

10 Q. Now Mr. McClain also described this case as one in which
11 there was either a Mary Carter agreement or a high/low
12 agreement with Garlock. Do you agree with that?

13 A. I do not. I heard that and I was surprised. In
14 California a Mary Carter agreement must be disclosed to
15 everybody in the court. No such thing was ever disclosed. I
16 never agreed to any such Mary Carter.

17 High/low is different. It's not a Mary Carter, so I
18 think he was just a little confused.

19 But, again, if we tried the case, we're not going to
20 agree to pay them money if we win. In a high/low you get a
21 defense verdict, you pay them the low number. We just didn't
22 go with cases to plaintiff's counsel with that approach. It
23 was, this is a fair number, take it or leave it.

24 And again, they dismissed the case at closing argument as
25 to Garlock.

1 Q. All right. Mr. McClain also talked about a changing
2 nature of the plaintiffs that were in asbestos litigation. He
3 talked about the '90s as consisting of insulators and other
4 similar job occupations, and then a change to other kinds of
5 occupation in 2000s. Do you agree with that?

6 A. I do not.

7 Q. Okay. What is your -- how would you describe the nature
8 of asbestos plaintiffs?

9 A. Well, it hasn't changed. I mean, nothing noticeable.
10 But the impression I was left with after hearing the
11 testimony, was that somehow insulators magically are in the
12 system and they disappear from the system. And that just
13 didn't happen. I still have insulator cases.

14 What happened -- and I even went back and looked at some
15 of the Kazan cases that we had, and there were a few insulator
16 cases in the '80s, a few in the '90s, but that's just -- there
17 was never this overwhelming number of insulator cases in
18 California, never. It has always been a mix of all the
19 different industries and trades and occupations that are
20 exposed to asbestos, whether it be refinery, a shipyard, or
21 Navy. It hasn't changed in any dramatic fashion.

22 As a matter of fact, if you noticed, we had that list of
23 Kazan cases. The last three cases we tried had nothing to do
24 with Navy shipyards, powerhouses. Their case mix changed, but
25 it went completely to something else. You're talking about

1 auto mechanics, you're talking about the JM plant. I mean, it
2 seemed to me, that their cases were driven by trying to get
3 the youngest plaintiff with the highest economic damages.
4 That's what you saw from the Kazan firm.

5 Q. Okay. Mr. McClain also testified about a change in focus
6 of the litigation. He -- in talking about the 2000s, he said
7 now brake defendants are huge, gasket defendants are huge,
8 boiler companies were huge until they went bankrupt, and
9 before you take \$1,000 from boiler companies in the end, they
10 were paying \$800,000 to \$900,000 a case. Do you recall that
11 testimony?

12 A. I do.

13 Q. Do you agree that in the 2000s that gasket defendants
14 were huge?

15 A. No, and they never have been, and they certainly are no
16 longer if they were.

17 Q. Okay. Did you bring any documents with you today to
18 describe, I guess, to respond to Mr. McClain's suggestions
19 about the role of gaskets in the litigation in the 2000s?

20 A. Yes, after listening to it, I thought maybe my memory was
21 faulty, so I went back and looked at the settlement documents
22 that I produced to your firm in this case in a discovery
23 request quite some time ago. These are letters I still had in
24 my desk regarding the group settlements between Dave McClain
25 and I.

1 Q. And these were documents that Garlock produced in this
2 case; is that right?

3 A. That is correct. Quite some time ago.

4 Q. Okay.

5 A. And this is a letter, I believe the date was 2004. And
6 what happened, the second paragraph here refers to it. What
7 had happened is, in 1998 and 2000 and 2002 whenever it was, we
8 got together to do a group, we would sit down and go case by
9 case. And invariably we hit a case where he wanted more money
10 than I was willing to pay, it was that simple. Instead of
11 fighting about it and getting angry, we agreed to defer it and
12 put it aside.

13 Well, we kept doing that, and we kept doing that, and it
14 happened every two or three years, and all of a sudden we had
15 this collection of, as he puts it I believe, "the best of the
16 best cases against Garlock" for them. The case had been
17 deferred over years, and years, and years, and you get down to
18 the bottom, it says, this leaves us with a group of 42 cases
19 which for the most part involve individual cases each worth
20 more than Garlock has ever paid in the past.

21 His demand, I think at the before -- well, before I get
22 to that, the first paragraph is something that we were
23 discussing and that is, this is 2004, and he's telling me that
24 once we settle this last group of cases, Garlock is done.
25 That they're moving on. They're looking elsewhere. And we're

1 not going to have much of anything to deal with in the future
2 going forward.

3 Q. Let me pause right there. Mr. McClain's testimony
4 suggested that Garlock was facing increasing pressures
5 throughout the decade of the 2000s; is that right?

6 A. It wasn't. This is mid-2000s and what he says is,
7 "considering the fact we filed about 10 cases a year", which
8 is actually -- I went back and checked, it was more like --
9 when they filed that, there were five served on Garlock the
10 next year. But "we should no longer be much of a concern to
11 Garlock regarding its cash flow". In other words, do this
12 deal, let's get it done and --

13 Q. Okay. What was the Kazan McClain firm asking for in
14 total settlement of these cases?

15 A. The demand for the 43 cases was \$15 million.

16 Q. Okay. Did these cases ever get resolved?

17 A. They did. Obviously with a demand of \$15 million, it
18 took more than a day -- end up taking about a year and two
19 months to get it accomplished with meetings every now and
20 then.

21 And again at the end of this -- the demand is there, but
22 he says it again, he says, "as you can see, these cases with
23 the exception of just a couple, are all the biggest Garlock
24 cases our office has ever had". This was the collection of
25 the best of the best of the cases. About a 10-year period of

1 time.

2 Q. And what -- you said that these cases ultimately got
3 resolved. What did they get resolved for?

4 A. For \$7 million, the average being about \$160,000 a case.

5 Q. So in the end these cases that you described as the best
6 of the best, were resolved for less than half of what the
7 Kazan firm had demanded?

8 A. Yes.

9 Q. You talked about -- you cited the early portion of the
10 letter where Mr. McClain suggested that Garlock -- excuse
11 me -- that his firm would not have an impact on Garlock's cash
12 flow going out into the future. Did that suggestion play out
13 that way?

14 A. Well, it -- actually it did. What happened though is,
15 while we were negotiating this group, my office came to
16 discover some other old cases, and his office came to discover
17 some other cases, and we ended up having another 20 or so
18 cases we had to deal with. So we did another deal in 2007,
19 for basically the same number \$160,000 a case. What did not
20 get included in that second group were the three cases that we
21 tried. I refused to pay any money on those cases and we tried
22 the ones we talked about, the Brayton case and Price case and
23 Plooy case.

24 Q. So did the Kazan firm settlement values increase over the
25 2000s?

1 A. It did not.

2 Q. Mr. McClain also said something about the "burdens of
3 proving the case from the defendant's point of view against
4 the so-called empty chair or another defendant". Do you
5 recall that?

6 A. I do.

7 Q. Can you -- he seemed to suggest that there was a
8 difficult burden that defendants such as Garlock would face.
9 Do you agree with that?

10 A. Well, the burden's the same, as he says, is plaintiff.
11 However, I think we're talking about whether it's the
12 discovery responses or the trust claim. Once you have the
13 exposure information to the other products, the insulation,
14 amphibole-containing product, the only other point I got to
15 prove is failure to warn, which consists of one simple
16 question to the plaintiff, did you ever receive a warning from
17 the insulation company. No. It's asked at depo, it's asked
18 in interrogatory. The answer is no. You've got your case
19 proven against whichever insulation company's products were
20 disclosed. That's it.

21 Q. He also described California law in talking about what's
22 required for a plaintiff to prove. He said -- he suggested
23 that the standard concerning causation was the following, "You
24 don't have to prove cause, just that it, the exposure,
25 increased one's risk". Do you agree with that?

1 A. I do not.

2 Q. Okay. Why not?

3 A. Well, California has pattern jury instructions. And it
4 is virtually impossible to get any other -- legal instruction
5 given to a jury by a judge. Because these have been proven
6 over time, and the judge gives these instructions, they cannot
7 be reversed because they're improper instruction.

8 And I believe his testimony was, he kept referring to the
9 case of Rutherford. The Rutherford case is where this
10 language and this pattern jury instruction came from. And
11 what it requires is to show the exposure of each product was a
12 substantial factor, not just a slight increase or risk, a
13 substantial factor.

14 Q. Okay. Now you pulled these quotes out of the California
15 jury instructions --

16 A. Yes.

17 Q. -- standard?

18 A. Yeah. The first paragraph is the actual instruction,
19 that's the law given to a jury. The quote below it would not
20 be given to the jury, but it's one of the citations below the
21 pattern jury instructions. And I just included that to show
22 that really, California follows what most of the states
23 follow, the frequency exposure, regularity exposure, and
24 proximity of exposure. It's the magic language you travel
25 around the country trying cases, you see that same language.

1 Q. Okay. Well, let's talk about trust claims. You have an
2 opinion as to whether the access to asbestos trust claims
3 would impact Garlock's trial risk or defense costs?

4 A. Absolutely.

5 Q. What's that opinion?

6 A. The trust claims that I saw, again, this was in Waters
7 and Kraus cases and Simon Eddins cases, could be used as an
8 admission against interest and admitted into evidence at
9 trial, just as a declaration, or as an answer to
10 interrogatory. And with that you've proven the plaintiff was
11 exposed to that with those products.

12 You could also use a trust claim to cross-examine
13 plaintiff's experts, whether it be industrial hygienists talk
14 about the exposures from insulation of thousands of fibers per
15 cc, or with their medical expert saying, isn't it a fact that
16 insulation is a proven undisputed cause of mesothelioma.

17 Q. Okay.

18 A. And then you use it with your experts, the same thing.
19 And the industrial hygienist, they confirm the exposures, use
20 it with your doctor, same question, that was a substantial
21 factor in causing the plaintiff's disease. It makes your
22 proof -- as I described the defense of Garlock or any low-dose
23 defendant as I described -- much easier.

24 Q. Okay. Now have you identified an example from the cases
25 that you examined in connection with your opinion that shows

1 how trust claims could impact Garlock's case?

2 A. Yeah. I didn't want to belabor the point. So I tried to
3 pick one that I don't think was discussed, from what I heard
4 earlier in this trial weeks ago. It was the Ornstein case
5 that we mentioned earlier in comparison --

6 Q. That was the case where we saw the interrogatory
7 responses earlier?

8 A. Right. And the answer to all three was "no" -- well,
9 two. The last two about any products of defendants that
10 weren't named in the Complaint. The answers were no exposure.
11 That included all the bankrupt entities that were not
12 disclosed in the answers.

13 Q. And what did your review of the Ornstein materials tell
14 you?

15 A. Well, as listed here there were various trust claims
16 submitted, pretty much all the typical standard insulation
17 companies which you'd expect as the plaintiff was in the Navy
18 and had the same exposures as they always did.

19 And in this case I recall there was, besides trust
20 claims, there were actual declarations signed by the plaintiff
21 under penalty of perjury to those exposures that were never
22 disclosed in the tort case.

23 Q. Okay. And have you identified one of those declarations?

24 A. A group went to Armstrong and here you have it, he's
25 describing his work on USS Estes, a Navy ship. And he says --

1 this is the plaintiff testifying, "I would remove and replace
2 insulation as well as clean up as needed". He described the
3 product, he says, "Armstrong 85 percent magnesia pipe covering
4 and block, Armstrong hi-temp pipe covering", which is a known
5 amosite -- not amosite -- amphibole-containing insulation
6 product.

7 And with that I never would have recommended my client
8 settle this case for \$450,000, far from it.

9 Q. Were there other declarations in the Ornstein materials?

10 A. There were numerous other declarations as to other
11 insulation products in those materials.

12 Q. Okay. So I just heard your testimony about your
13 recommendation, but just to be clear, had you had this
14 information available to you, would it have changed the way
15 Garlock evaluated the Ornstein case?

16 A. It would have changed the way I evaluated the Ornstein
17 case. They generally relied on my expert opinion for
18 California cases. And I would have recommended the same
19 numbers we used to pay in the 1990s. Because nothing has
20 changed, we're back where we were with this information.

21 Q. Okay. You described earlier how you could use trust
22 claims in litigation. How would you use information such as
23 this?

24 A. This is a declaration from the plaintiff himself. And
25 you can do all the semantic back and forth about a trust

1 claim. This is a declaration. This is his under oath
2 testimony. It is admissible for all the purposes I described.
3 You can put it right into evidence. You could use it to cross
4 him with. You can use it with experts. You could show it to
5 the jury. It would be very powerful.

6 MR. KRISKO: Your Honor, I've got approximately 20
7 more minutes of questions that they're probably best evaluated
8 in a comprehensive setting. I know it's getting close to the
9 5:30 time you mentioned earlier. I just wanted to let you
10 know or ask you if we should proceed or --

11 THE COURT: I think we probably ought to stop and
12 just pick this back up on the 22nd. Okay.

13 So why don't we break now.

14 Mr. Miller, would you tell the people that are
15 outside they can come back in. We just at least let everybody
16 know we're going to come back on the 22nd.

17 (The courtroom is now open to the public.)

18 THE COURT: Now Judge Conrad does need this
19 courtroom tomorrow, so the more you all can get out, the
20 better, I suppose.

21 MR. KRISKO: Thank you, Your Honor.

22 THE COURT: I'm not sure what of this is yours and
23 what belongs to the Court, but you need to clear out, and I
24 will find out, I think we may be able to be back in here on
25 the 22nd.

1 That's what they say so, but we'll let you know. So
2 we'll plan on being back in here, is 9:00 okay?

3 MR. GUY: Yes, Your Honor.

4 THE COURT: Okay. Be back in here at 9:00 on August
5 22nd. And we'll try to wrap it up. Okay.

6 MR. KRISKO: Thank you, Your Honor.

7 THE COURT: Thank you all.

8 (The hearing concluded at 5:23 p.m.)

9 (End of Proceedings.)

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1 UNITED STATES DISTRICT COURT
2 WESTERN DISTRICT OF NORTH CAROLINA
3 CERTIFICATE OF REPORTER

4 I, Laura Andersen, Official Court Reporter, certify
5 that the foregoing transcript is a true and correct transcript
6 of the proceedings taken and transcribed by me to the best of
7 my ability.

8 Dated this the 14th day of August, 2013.

9 s/Laura Andersen
10 Laura Andersen, RMR
11 Official Court Reporter
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Laura Andersen, RMR 704-350-7493